MIDDLE EAST@WAR No.44

CZECHOSLOVAK ARMS EXPORTS TO THE MIDDLE EAST

VOLUME 2: SYRIA 1948-1989

Martin Smisek

MIDDLE EAST @ WAR SERIES

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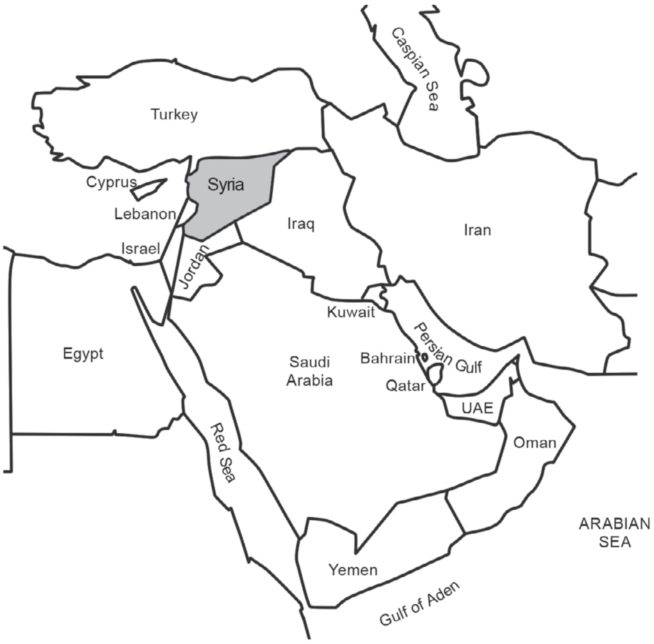

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In order to simplify the use of this book, all names, locations and geographic designations are as provided in *The Times World Atlas*, or other traditionally accepted major sources of reference, as of the time of described events. Similarly, Arabic names are romanised and transcripted rather than transliterated. For example: the definite article al- before words starting with 'sun letters' is given as pronounced instead of simply as al- (which is the usual practice for non-Arabic speakers in most English-language literature and media). Instead of using the diacritical marks to represent the letter 'ayn, double a is used, while names like 'Faisal/Feisal' are spelled as 'Faysal'.

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Unit 8 Amherst Business Centre, Budbrooke Road, Warwick CV34 5WE, England
Tel. 01926 499 619
Email: info@helion.co.uk Website: www.helion.co.uk Twitter: @helionbooks Visit our blog http://blog.helion.co.uk/

Published by Helion & Company 2022
Designed and typeset by Farr out Publications, Wokingham, Berkshire
Cover designed by Paul Hewitt, Battlefield Design (www.battlefield-design.co.uk)

Text © Martin Smisek 2022
Photographs © as individually credited
Colour artwork © David Bocquelet and Tom Cooper 2022
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Cover photo: A flight of three L-29s of the SyAAF, seen in the 1970s. The type played a crucial role not only in training dozens of new Syrian pilots when the re-established air force needed them most urgently, in the mid-1960s, but also in training of two dozen subsequent generations of Syrian pilots. (Martin Smisek Collection)

Cover artwork: After purchasing 55 L-39ZOs, Syria acquired a total of 44 L-39ZAs: a variant armed with a 23mm gun installed under the cockpit - in addition to four underwing pylons rated for a load of 250kg (outboard hardpoints) and 500kg (inboard pylons), respectively. (Artwork by Tom Cooper)

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ISBN 978-1-804510-93-3

British Library Cataloguing-in-Publication Data.
A catalogue record for this book is available from the British Library.

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ABBREVIATIONS

AB	air base
APC	armoured personnel carrier
ATD	Air Training Department of the Syrian Arab Air Force
c/n	construction number
HTS	Hlavní technická správa (Main Technical Administration)
IFR	instrument flight rules
KSČ	Komunistická strana Československa (Communist Party of Czechoslovakia)
ÚV KSČ	Ústřední výbor Komunistické strany Československa (Central Committee of the Communist Party of Czechoslovakia)
MTC	Military Technical College
NCO	non-commissioned officer
s/n	serial number
SyAAF	Syrian Arab Air Force
USSR	Union of Soviet Socialist Republics
VFR	visual flight rules
VAAZ	Vojenská akademie Antonína Zápotockého (Antonín Zápotocký Military Academy)
ZF VAAZ	Zahraniční fakulta Vojenské akademie Antonína Zápotockého (Foreign Faculty of the Antonín Zápotocký Military Academy)

INTRODUCTION

With the delivery of decommissioned ex-Wehrmacht StuG III assault guns from Czechoslovakia in 1955, Syria became the first Arab state to acquire military hardware from any communist country.

After the end of the Second World War, the Czechoslovak arms industry tried to return to the significant position it had before the Nazi occupation of Czechoslovakia in March 1939. However, due to the onset of the Cold War, this was not entirely possible. The influence of the United States prevented Czechoslovak companies from exporting arms to Latin American countries. At the same time, Soviet dominance made it impossible to supply military hardware to the traditional Czechoslovak pre-war market in the Balkans. This left the Middle East as one of the few opportunities to build on the pre-war business. Coincidentally, the Middle East in those times was an area of rapidly rising tensions, which made it imperative for Arab and Jewish officials alike to look for opportunities to buy weapons.

Therefore, on 23 November 1947, Syrian representatives signed a contract with Zbrojovka Brno for the supply of weapons for the Arab Liberation Army, the military formation of mainly Syrian, Lebanese and Palestinian volunteers that fought on the Arab side. The deal stipulated delivery of 10,000 P-18 rifles, 1,000 ZK 383 submachine guns, 500 MG 34 machine guns and 11.5 million rounds of related ammunition. The first batch composed of 8,000 P-18 rifles with 6 million rounds of 7.92mm ammunition was dispatched to Yugoslavia where it was loaded on the Italian liner SS *Lino* (more details about this delivery can be found in Volume 1 of this series).

However, the transport of the remaining arms from this contract was later cancelled upon the urging of Jewish officials since the newly emerged State of Israel also tried to obtain weapons in Prague. Simultaneously, Czechoslovakia became an integral part of the Soviet Bloc which was heralded by the communist *coup d'état* in February 1948. In the end, the Czechoslovak communist-led government decided, with backing from Moscow, to prefer Israel in deliveries of armament, which subsequently led to violating the UN arms embargo. These arms – largely infantry weapons and fighter aircraft – played a crucial role in the subsequent 1948 Arab-Israeli War. When it became clear that Israel would not become a communist country, solid relations between the two states were disrupted by the Czechoslovak government. In addition, in July 1950, the Czechoslovak Ministry of National Defence prohibited the export of all Czechoslovak weapons to Israel.

At the same time and in accordance with Soviet wishes, Prague embarked on the establishment of massive arms manufacturing capacities. The maximum weapons production from 1951–53 was known as the three-year arms plan and was largely dedicated to the licenced production of Soviet guns, tanks and fighter aircraft, whose deliveries were then to be made primarily to the Czechoslovak Army and other armed forces of the Soviet Bloc states. However, this policy ran into problems just a few years later when, due to communists mismanagement and enormous arms spending, the recipient countries had problems buying additional weapons and paying for them.

Meanwhile, however, interest in the supply of armament from communist Czechoslovakia began to increase in Third World countries. Thanks to this, Prague was able to preserve its large capacity for the production of military hardware and at the same time earn the necessary foreign currency (pounds sterling or the United States dollar) by exporting weapons outside the Warsaw Pact states. Not only did Syria became one of the first customers, but Damascus also remained the most loyal client of Czechoslovak arms in the Middle East until the fall of communism in Czechoslovakia in 1989.

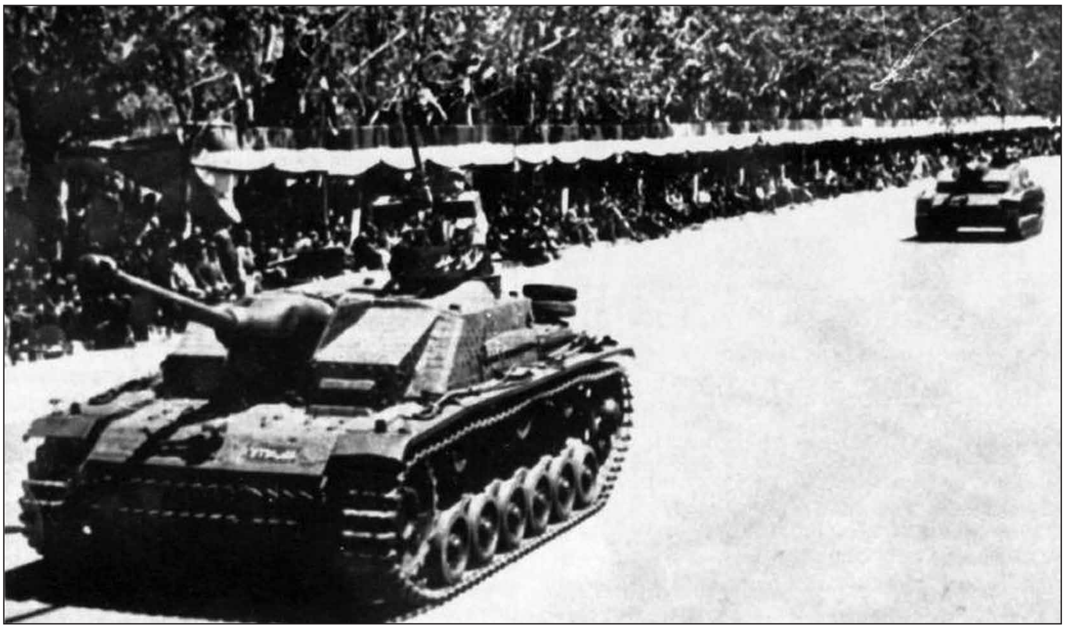
1

SYRIA (OPERATION 104, COUNTRY 627, OPERATION 659)

Growing discontent with the military autocracy of Syrian President Adib al-Shishakli eventually led to a *coup d'état* in February 1954. The elderly Hashim Khalid al-Atassi became the new president, who tried during his short tenure to limit the influence of military officers and continuously increasing leftist feelings characterised by socialist ideology, sympathy towards the Soviet Union and adherence to the policy of Egyptian leader Gamal Abdel Nasser. Following these developments, Czechoslovak officials came to the conclusion that renewed placement of Czechoslovak diplomatic representation in Syria could have advantageous prospects (Czechoslovakia had a diplomatic mission on Syrian soil between 1926 and 1951 in the form of an honorary consulate in Aleppo). The establishment of a Czechoslovak embassy in Damascus was approved by the Czechoslovak government in March 1954, the embassy opening in March the following year.[1]

GERMAN ARMOUR FOR THE SYRIAN ARAB ARMY

During the same month (March 1955), Syrian military officials turned to Czechoslovak representatives with a request for delivery of armament. Expecting that the Czechoslovak People's Army still had armour of German origin from the Second World War, the Syrians requested delivery of PzKpfw IV medium tanks (in order to complement the examples bought two years previously in France) and Hummel self-propelled guns. Although 12 of the latter vehicles



A pair of StuG III Ausf. Gs of the 70th Armoured Brigade, seen during a military parade in Damascus in 1958 (by when Syria had joined Egypt to form the United Arab Republic). Notable on the flat surfaces of the vehicles are traces of the application of the Zimmerit paste, used to prevent attachment of magnetic mines during the Second World War. (Albert Grandolini Collection)

A still from a documentary film, showing the rear of a PzKpfw IVs of the 70th Armoured Brigade. Although the Syrians acquired additional examples from France and even Spain, most of these were in very poor condition: the mass of their operational Panzer IVs thus came from Czechoslovakia. (Tom Cooper Collection)

were used by the 8th Fortress Brigade (*8. pevnostní brigáda*) for some time, because of their poor technical condition they were retired around 1954 and thereafter used as a source of spare parts before being scrapped. Thus, Hummel self-propelled guns were not available to satisfy Syrian demands. However, the Main Technical Administration (*Hlavní technická správa*, HTS) of the Ministry of Foreign Trade was ready to talk, and during negotiations in Czechoslovakia in April 1955 offered surplus StuG III assault guns instead.[2] The Syrians eventually accepted this offer, and a contract for the delivery of 45 PzKpfw IV tanks and 12 StuG III guns with spare parts, with a total value of £254,644 (5,134,000 CSK), was signed on 11 May 1955. Officials from the HTS were more than happy because, according to their own words, the vehicles were only worth scrap but they were sold for a price more than 11 times higher.[3]

Tanks and assault guns for the Syrian Arab Army were stored at the 2nd Tank Base (*2. tanková základna*) in Žilina (Czechoslovak tank bases in the first half of the 1950s functioned as storage depots for surplus German, Soviet and British armoured vehicles of Second World War-vintage that would be used as a wartime reserve). This unit quickly prepared selected armour into a combat-ready state – deliveries of the vehicles were finished during early August 1955, and shipments of spare parts continued until November of the same year. Each tank and assault gun underwent test drives of 10–50km (6–31 miles), on and off road. Six vehicles (five PzKpfw IVs and one StuG III) also passed firing trials of their main guns. After the successful testing, an HTS representative carried out a final inspection and signed acceptance documents. After this procedure, vehicles were cleaned and sealed up. To maintain secrecy (the 2nd Tank Base had no fence), tanks and assault guns were transported to the 2nd Central Equipment Depot (*2. ústřední sklad výstroje*) at Vrútky. Here, a steam crane helped place them in specially designed transport frames covered with planking and then loaded them onto five trains that ferried them to the Romanian port of Constanța between June and August 1955. Spare parts were obtained by cannibalising 15 tanks and 12 assault guns. Syria paid for the delivered goods from this contract in cash.[4]

2

DELIVERIES WITH SOVIET PARTICIPATION

Swift and proper delivery left a positive impression on Syrian officials, including General Shawkat Shukeir, Chief of the Syrian General Staff, who personally expressed his thanks to the Czechoslovak ambassador in Damascus together with a desire to buy additional Czechoslovak weapons in exchange for Syrian cotton and fabrics. When a Syrian representative visited Czechoslovakia in order to accept delivery of spare parts for the already supplied PzKpfw IV tanks and StuG III guns, he submitted a request for delivery of arms for two tank battalions, a self-propelled gun battalion, two motorised infantry battalions and two anti-aircraft artillery battalions, including spare parts together with 100 tonnes of tracks for PzKpfw IV tanks.

The Syrians once again requested Hummel self-propelled guns, but primarily wanted weapons of Soviet origin, including types that were not produced in Czechoslovakia under licence (such as SON-4 fire control radars, BTR-152 APCs and armoured recovery vehicles based on the T-34 chassis). The HTS approached other European communist countries in a bid to obtain Hummel self-propelled guns but was unsuccessful. Instead, StuG III assault guns were offered, and were again accepted. The Soviets were asked if they were willing to participate in the emerging deal in an *aide-mémoire* from 14 September 1955. The remaining armament was to be delivered from the stocks of the Czechoslovak People's Army or directly from production.[1]

During the course of the negotiations, Syria also requested the delivery of submachine guns. Consequently, a further arms contract between Czechoslovakia and Syria was signed on 17 January 1956, covering the delivery of 15,000 Sa 25 submachine guns and related spare parts worth 3,775,000 CSK (1,132,500 CSK was to be paid in cash in British pounds, the remaining 2,642,500 CSK in Syrian goods). A series of further deals, including two massive ones with direct Soviet participation, followed in short order, and these are detailed in Table 1. Moscow provided items such as APCs, radars and artillery ammunition. However, the Soviet Union was not Prague's sole foreign source of military materiel in this business; for example, 12.7mm machine gun ammunition (BZT and B-32) was to be re-exported from Poland. The total value of Polish deliveries during agreements from 20 February to 22 May 1956 was 9,555,000 CSK.[2]

Unfortunately, the exact scope of individual contracts is not clear from available documentation, but their overall value reached 410,606,421 CSK, including a Soviet share of 46,318,118 CSK. An overview of all items delivered from Czechoslovakia and some of the most important examples of military hardware provided by the Soviet Union within the frame of these agreements are shown in Table 2. The Syrians signed another smaller deal for arming the Jordanian National Guard, but the weapons eventually remained in Syria due to political turmoil in Jordan.[3]

The arms were usually transported by train to the Soviet port of Nikolayev (today's Mykolajiv in Ukraine) on the Black Sea, then loaded on Soviet ships and ferried to Syria.[4] The huge volume and fast pace of deliveries (artillery materiel came from the stocks of the Czechoslovak People's Army, the rest delivered directly from Czechoslovak production plants) enabled the Syrians to carry out rearmament of large parts of their armed forces in a very short period. While the Syrian Arab Army benefited from these developments, the Syrian Arab Air Force was not so fortunate. Its MiGs were delivered to Egypt, where Czechoslovak Air Force instructors were executing conversion training of Syrian pilots and aircraft technicians. However, when the Suez War broke out in late October 1956 most of the Syrian MiGs were destroyed on the ground during the fighting.

Although Czechoslovakia granted credit at 20–25 percent over three or four years, in British pounds with the rest in goods, the Syrian economy was in no condition to pay for all the delivered arms. Therefore, on 3 January 1957, the Syrian Minister of Foreign Affairs, Salah al-Din al-Bitar, asked for the postponing of several instalments. After repeated Syrian requests, Prague finally extended the credit terms for a further four years in December 1957.[5] Despite the precarious condition of Syria's economy, representatives from its Ministry of Defence kept on requesting additional arms shipments, although the role Prague played in these developments was minimal. The Syrians were requesting more advanced technology, such as MiG-17s, new types of radar or night-vision devices, that were not produced in Czechoslovakia. In the meantime, Syria established direct links with the Soviets, who were ready to provide the required weapons for cheaper prices or better terms of payment in order to achieve political influence in Damascus.[6] Syria played a double

Within the frame of Czechoslovak-Syrian arms agreements Prague also provided military hardware from the Soviet Union such as these BTR-152 armoured personnel carriers participating in a Damascus military parade in April 1966. Note that the troops are wearing chemical protection suits. (via Martin Smisek)

Table 1: Czechoslovak-Syrian Arms Agreements, 1956–58[8]				
Date Of Agreement	**Approved by the Politburo ÚV KSČ**	**Contract**	**Value Of Agreement**	**Actual Drawdown**
20 February 1956	9 February 1956	Contract 201	£5,000,000 (including Soviet share)	£4,982,053
22 May 1956	21 May 1956	Contract 202	£8,595,000 (including Soviet share)	£8,207,775
4 October 1956	4 June 1956	Contract 203	£2,547,000	£2,533,031
4 October 1956	4 June 1956	Contract 204	£955,272	£955,270
6 June 1957	5 February 1957	Contract 206	£1,800,000	£1,786,012
28 April 1958 (contract with United Arab Republic)	-	Contract 207	£1,470,110	£1,430,781

Table 2: Military hardware delivered within the frame of Czechoslovak-Syrian Arms Deals, 1955–58[9]			
Type	**Number of examples**	**Year of delivery**	**Note**
vz. 44, 26.5mm signal pistol	78	1956	
26.5mm signal round	8,400	1956	
Sa 23 and Sa 25, 9mm submachine gun	31,000	1956	delivery in 1957 from the stocks of the Ministry of Interior, 3,000 Sa 23 originally destined for Jordan (Syria acted as a middleman, weapons remained in Syria)
	5,000	1957	
vz. 52, 7.62mm rifle	20,000	1956	10,000 originally destined for Jordan (Syria acted as a middleman, weapons remained in Syria)
	20,000	1957	
vz. 52, 7.62mm light machine gun	2,500	1956	originally destined for Jordan (Syria acted as a middleman, weapons remained in Syria)
vz. 48, 9mm round	14 million	1956	for Sa 23 and Sa 25 submachine gun, 3 million originally destined for Jordan (Syria acted as a middleman, ammunition remained in Syria)
	5 million	1957	
vz. 52, 7.62mm round	20 million	1956	for vz. 52 rifle and vz. 52 machine gun, 10 million originally destined for Jordan (Syria acted as a middleman, ammunition remained in Syria)
7.62mm rimfire round	3.96 million	1956	
RG-4, hand grenade	301,600	1956	
T-21, bazooka	800	1956	200 originally destined for Jordan (Syria acted as a middleman, weapons remained in Syria)
round for T-21	30,000	1956	5,000 originally destined for Jordan (Syria acted as a middleman, ammunition remained in Syria)
vz. 31/37, 122mm gun	25	1956	Czechoslovak licence of M1931/37 (A-19)
vz. 38, 122 mm howitzer	56	1956	Czechoslovak licence of M1938 (M-30)
vz. 44, 85mm anti-aircraft gun	32	1956	Czechoslovak licence of M1944 (KS-1)
vz. 51, 130mm multiple rocket launcher	8	1956	
	8	1958	
85-JPSv-PLK 44, 85mm armour-piercing round	1,800	1956	for vz. 44 anti-aircraft gun
85-JČ-PLK 44, 85mm time-setting round	18,000	1956	for vz. 44 anti-aircraft gun
130-JRRO-RM51, 130mm fragmentation rocket	5,500	1956	for vz. 51 multiple rocket launcher
	24,100	1958	
AST vz. 53, artillery periscopic telescope	61	1956	
PAB, artillery compass	73	1956	
TZK, anti-aircraft telescope	9	1956	

Table 2: Military hardware delivered within the frame of Czechoslovak-Syrian Arms Deals, 1955–58[9]

Type	Number of examples	Year of delivery	Note
vz. 36, anti-aircraft rangefinder	50	1957	
DJA-6, anti-aircraft rangefinder	8	1956	
PUAZO-4a, fire control director	8	1956	for vz. 44 anti-aircraft guns, from Czechoslovak licence production, further nine examples delivered from the USSR in 1956
	4	1958	
SON-4, fire control radar	9	1956	for vz. 44 anti-aircraft guns, delivered from the USSR
PzKpfw IV, medium tank	45	1955	Czechoslovak designation T-40/75
T-34/85, medium tank	120	1956	from Czechoslovak licence production, delivered including 36 V-2 spare engines and 15 spare guns
StuG III, assault gun	12	1955	Czechoslovak designation SD-75/40
	20	1956	
SD-100, self-propelled gun	36	1956	Czechoslovak licence of SU-100, delivered including four spare guns (engines identical with T-34/85)
75mm high explosive round	6,500	1956	for StuG III assault guns
75mm armour-piercing round	3,500	1956	for StuG III assault guns
85-JOF-TK 44, K 52, PLK 39, 85mm high explosive round	50,400	1956	for T-34/85 tank
85-JPSv-TK 44, K 52, PLK 39, 85mm armour-piercing round	28,800	1956	for T-34/85 tank
100-JOF-ShK 44, K 53, TK, 100mm high explosive round	19,000	1956	for SD-100 self-propelled gun
	15,000	1957	
100-JPSv-ShK 44, K 53, TK, 100mm armour-piercing round	14,500	1956	for SD-100 self-propelled gun
BTR-152, armoured personnel carrier	120	1956	delivered from the USSR, ordered in two batches composed of 45 and 75 vehicles respectively
MiG-15bis, fighter	20	1956	Czechoslovak designation S-103, from Czechoslovak licence production
MiG-15UTI, combat trainer	4	1956	Czechoslovak designation CS-102, from Czechoslovak licence production
N-37, 37mm aircraft cannon	10	1956	spare cannon for MiG-15bis
OZT and BZT, 37mm HEI-T and API-T round	40,000	1956	for N-37 aircraft cannon
OZT and BZT, 23mm HEI-T and API-T round	160,000	1956	for NR-23 aircraft cannon
Raketa, pilot emergency parachute	24	1956	for MiG-15 pilots
JAWA 350, motorcycle	320	1956	
JAWA 500, motorcycle	80	1957	
Praga V3S, medium truck	335	1956	
	146	1958	
Škoda 706 RO, city bus	10	1956	
	15	1957	
Škoda 706 R, refrigerator truck	3	1957	
Škoda 706 R, water spraying truck (AKVM)	25	1957	
Tatra 111, heavy truck	97	1956	some vehicles were used as artillery tractors for vz. 38 and vz. 44 guns
	22	1957	

Table 2: Military hardware delivered within the frame of Czechoslovak-Syrian Arms Deals, 1955–58[9]

Type	Number of examples	Year of delivery	Note
Tatra 111 C, fuel tank truck	29	1956	
Tatra 805, ambulance truck	50	1956	
	75	1957	
AV-3, recovery vehicle	17	1957	on Praga V3S chassis
HSC-4, mobile crane	17	1957	on Tatra 111 chassis
	1	1958	
PAD-4, mobile car workshop	1	1958	the workshop was composed of 10 Praga V3S trucks, two A3S trailers, one EC 30 kVA power-generating set and one EC 15 kVA power-generating set
PTDA, mobile tank workshop	8	1956	on Praga V3S chassis
	8	1957	
PTDB, mobile tank workshop	4	1956	on Praga V3S chassis
	4	1957	
PDDD, mobile divisional artillery workshop	1	1956	the workshop was composed of five Praga V3S trucks, two A3S trailers and one EC 30 kVA power-generating set
PPDD, mobile regimental artillery workshop	6	1956	on Praga V3S chassis
A3C, fuel tank trailer	29	1956	trailers for Tatra 111 C fuel tank trucks
RM-31S, radio	10	1956	
RM-31T, radio	43	1956	
TÚ-21, field telephone exchange	50	1958	
PK-1, telephone cable	600 km	1957	
spooler	100	1956	
NV 10 E, road roller	1	1956	
EC 15 kVA, power-generating set	5	1956	further three examples delivered in 1959
	4	1957	
NS-1250, charger set 1.25kW	4	1956	
KD-2, diesel compressor	10	1956	
DM 11, smoke pot	20,000	1956	
RDG-2, hand smoke grenade	50,000	1956	returned to Czechoslovakia
PT-Mi Ba, Bakelite anti-tank mine	80,000	1956	
	50	1957	
	6,364	1958	
PT-Mi Ba Cv, training Bakelite anti-tank mine	1,000	1956	further 1,000 examples delivered in 1959
PP-Mi Šr, anti-personnel shrapnel mine	10,000	1956	
	5,466	1964	
PP-Mi Šr Cv, training anti-personnel shrapnel mine	1,000	1956	
PN-4, explosive block	2,000	1956	
UTN-2, explosive block	2,000	1956	
UTN-600, explosive block	2,000	1956	
Náložka 200g, explosive block	10,000	1956	
RO-1, fuse	2,000	1956	
RO-4, fuse	8,000	1956	
RO-7/II, fuse	5,000	1956	

Table 2: Military hardware delivered within the frame of Czechoslovak-Syrian Arms Deals, 1955–58[9]

Type	Number of examples	Year of delivery	Note
RO-10, fuse	2,000	1957	
Rozbuška Ž, detonator	15,000	1956	
TN, linear charge (1.5 metres)	1,000	1956	
PLH 10, plastic explosive	10 tonnes	1956	
small rubber boat (for four persons)	50	1956	
large rubber boat (for 12 persons)	50	1956	
MV 16k, outboard motor	50	1957	
camouflage net for one person 1x1.5m	20,000	1956	
Maska V 6x6, camouflage net	1,500	1956	
Maska V 9x9, camouflage net	2,900	1956	
Maska T 12x12, camouflage net	1,800	1956	
	98	1957	
Maska DA 18x18, camouflage net	200	1956	
Maska L 18x18, camouflage net	200	1956	
barbed wire	1,100 tonnes	1956	
Vrták zemní ruční 11, manual earth auger	100	1956	
MŘP-50, chain saw	18	1956	
Souprava pneumatických nástrojů 11, pneumatic tools set	5	1957	
wood cutting machines	4	1958	
rubber water tank, 100 litres	15	1956	
PK-26, mobile field kitchen	200	1956	
	504	1958	
KPN, mobile field bakery	5	1956	
boots for paratroopers	3,900 pairs	1957	
tank lecture room	1	1956	
artillery lecture room	1	1957	
Tatra 111 lecture room	1	1957	

game at every opportunity – requesting the same arms from Prague and Moscow simultaneously, then waiting to see who would provide better conditions of delivery.[7]

ADVISING THE SYRIANS

The Politburo (*Politické byro*) of the Central Committee of the Communist Party of Czechoslovakia (ÚV KSČ) approved not only the delivery of arms to Syria, but the sending of Czechoslovak officers to train Syrian troops as well. Indeed, following a number of chaotic demands from Syrian officials, several Czechoslovak advisory groups were dispatched to Syria and Egypt in order to train Syrian military personnel.

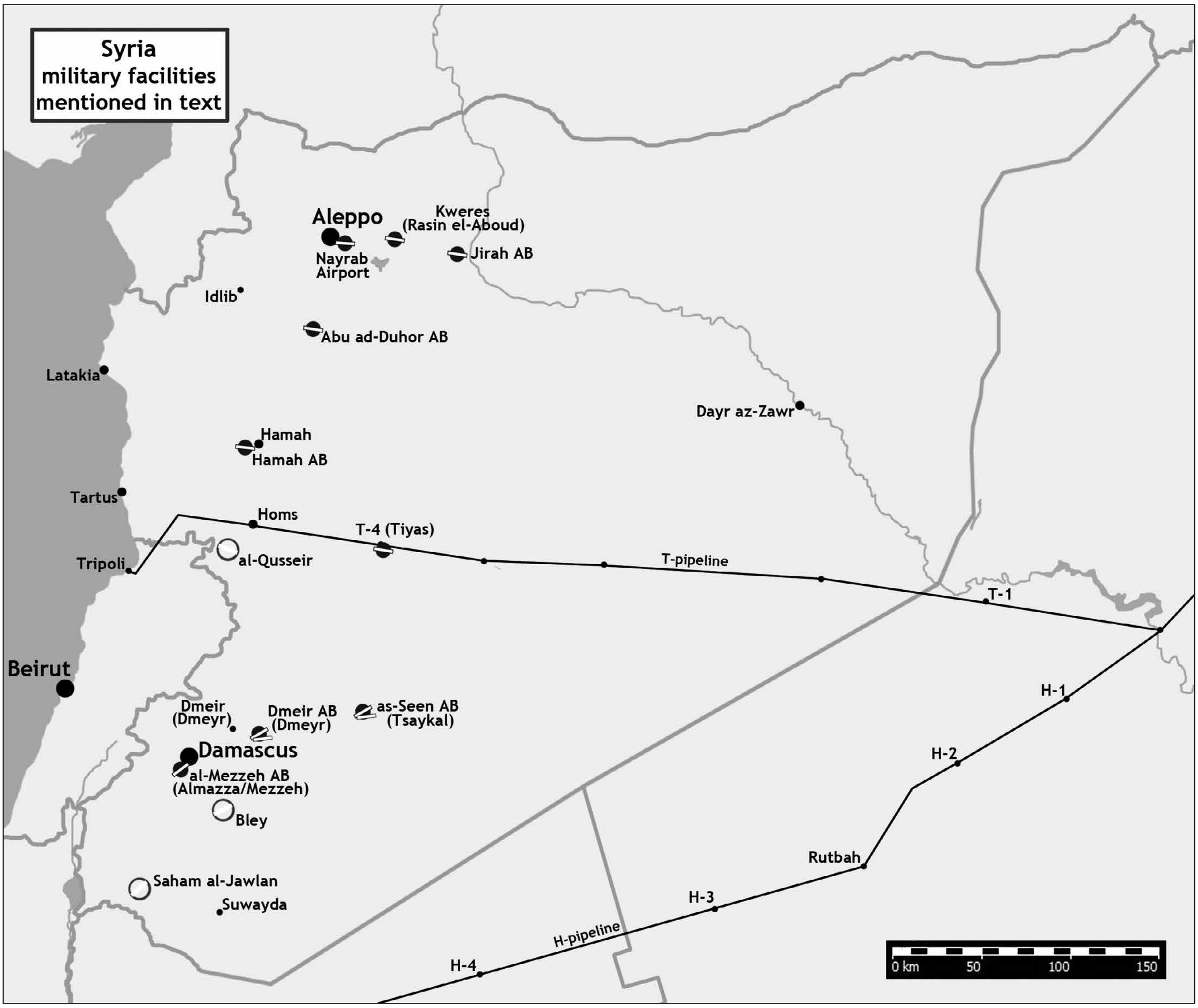
The first Czechoslovak advisory team which arrived in Syria on 16 June 1956 comprised Major Oldřich Císař and 1st Lieutenant Ludvík Pištěk. Their task was to teach tank maintenance according to Czechoslovak experience and to train Syrian technicians in providing regular, medium and general overhauls of tanks.[10] Despite numerous problems (insufficient theoretical knowledge on the part of Syrian trainees, the required spare parts were delivered from the warehouse late and incomplete, some spare parts having to be produced from scratch), the Syrians under the guidance of the Czechoslovak advisors were able to maintain 100 percent mobility of their assigned tanks. The course was due to be terminated on 15 November, but because of several postponements, the instructors only returned home on 18 December.[11]

The Czechoslovak advisory group for maintenance and repairs of vz. 44 guns and PUAZO-4a fire control directors started its operation in Syria on 23 July 1956. The team was made up of Captain Jaroslav Boček, Captain Bohumil Zavadil and two interpreters, Ján Bača and Svatopluk Hrnčiřík. They first visited an anti-aircraft artillery unit at

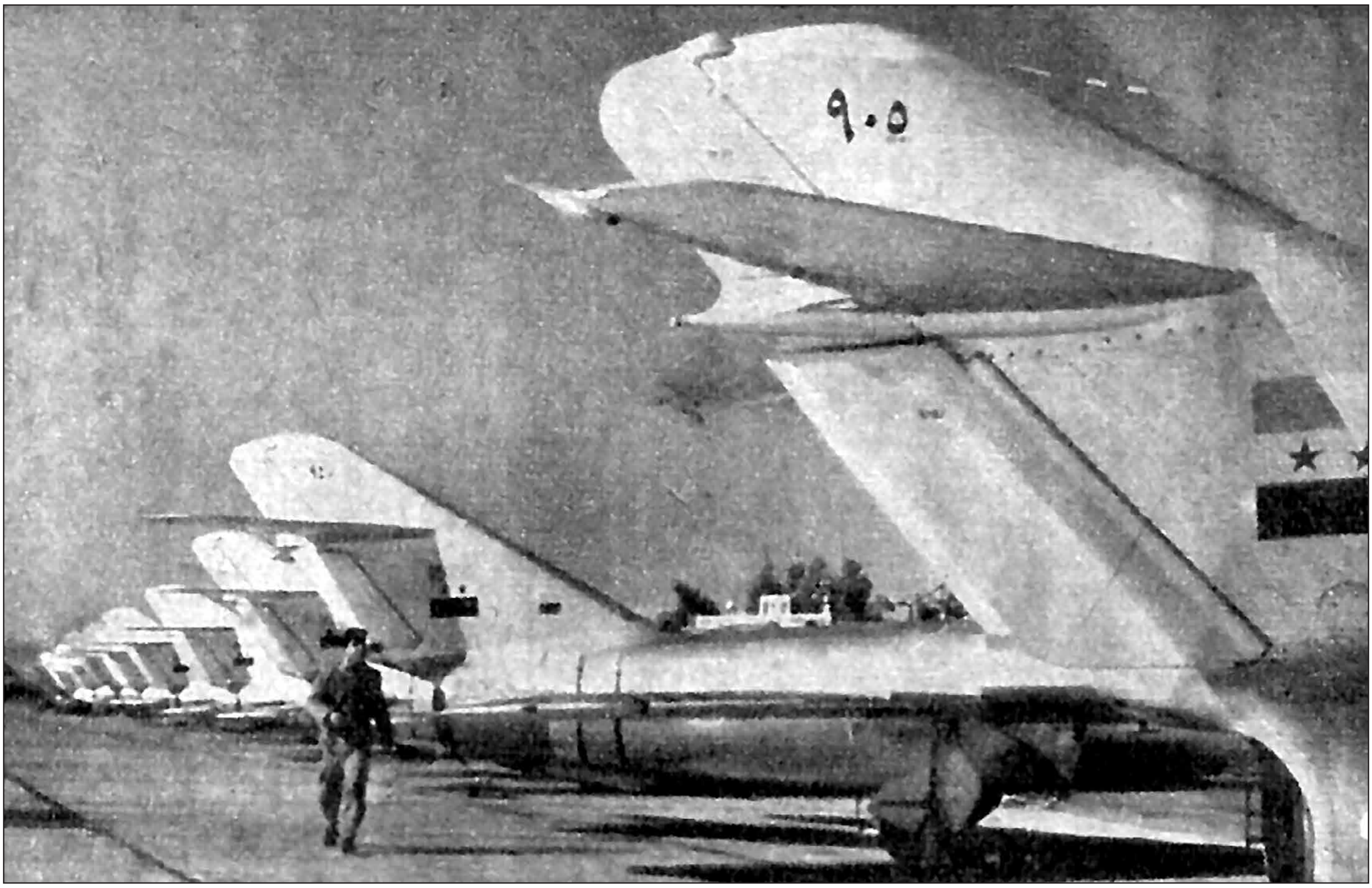
Damascus that had four guns and one PUAZO. Its commander had graduated from a training course in Czechoslovakia and started the training of his soldiers. The Czechoslovak advisors found out that up until then, the materiel received only superficial maintenance. Wasting no time, they went straight to work, and with the assistance of Syrian crews rectified the poor technical condition of the guns and PUAZO between 24 and 28 July. Captains Boček and Zavadil then visited Homs, where the remaining vz. 44s and PUAZO-4as were stored but discovered that the condition of the materiel was at least as poor as in the combat unit. Although delivered basically brand-new from Czechoslovakia, during their three-month-long 'service' in Syria, 10 guns and two PUAZOs already had damaged chassis. Moreover, one vz. 44 and one PUAZO-4a had crashed during their transport from the port. The Czechoslovak advisors thus repeated the exercise, and with the assistance of some 30 Syrian soldiers carried out thorough maintenance from 29 July to 3 August.

During the following week, the guns and PUAZOs were transported to storage hangars some 5km (3 miles) from Damascus. The Czechoslovak officers were then asked to carry out a re-examination of four guns and ready them for a live firing exercise, that was undertaken successfully on 5 September, to the full satisfaction of Syrian military leadership. Only then could they finally start with two training courses, for maintenance and repair of the vz. 44 and PUAZO-4a. The training was partially hampered by language problems (Czech was translated into French, then into Arabic) and insufficient knowledge of technical terminology by the Czechoslovak and Syrian interpreters. The courses finished in November with oral and practical exams, in both of which the Syrian soldiers (and two civilian employees) achieved good results.

At the time of the Suez War, the Czechoslovak advisors assisted with the build-up of the Damascus air defences, comprising four batteries equipped with vz. 44 guns. During their stay in Syria, they also met two Soviet experts responsible for a maintenance course for SON-4 fire control radars. During the course of one discussion, the Soviets told the Czechoslovak officers that their student soldiers had very low qualifications and had to be replaced with civilian engineers, who attended the training course after they finished their regular jobs. Furthermore, the Czechoslovak advisors observed the abundance of bureaucracy in various military departments, the preference of officers not to serve with combat units but in offices, and their unwillingness to share their expertise and experience. The officers trained in Czechoslovakia kept their knowledge only for themselves, considering it an opportunity for promotion or to get a better-paid post. The Czechoslovak advisory group for maintenance and repairs of vz. 44s and PUAZO-4as eventually left Syria on 25 November 1956.[12]


Syria
military facilities
mentioned in text
Aleppo
Kweres
(Rasin el-Aboud)
Nayrab
Airport
Jirah AB
Idlib
Abu ad-Duhor AB
Latakia
Dayr az-Zawr
Hamah
Hamah AB
Tartus
Homs
T-4 (Tiyas)
al-Qusseir
Tripoli
T-pipeline
T-1
Beirut
H-1
Dmeir
(Dmeyr)
Dmeir AB
(Dmeyr)
as-Seen AB
(Tsaykal)
Damascus
al-Mezzeh AB
(Almazza/Mezzeh)
H-2
Bley
Rutbah
Saham al-Jawlan
Suwayda
H-3
H-pipeline
H-4
0 km
50
100
150

A map of military facilities related to deliveries of arms and the activities of Czechoslovak advisors, as mentioned in the text. (Map by Tom Cooper)



Two examples of the MiG-15bis originally acquired by Syria – serials 905 (foreground) and 940 (second in the row) – seen in service with the United Arab Republic Air Force (the official designation of the Egyptian air force from 1958 until 1972) in 1959-1960. (Jens Heidel Collection)

RADAR NETWORK STUDY AND AIRFIELD SURVEY

Upon the request of Syria, Colonel General Václav Kratochvíl, Chief of the General Staff of the Czechoslovak People's Army, ordered the rapid making of a radar network study for the Syrian Arab Armed Forces on 18 May 1956. The study was to concentrate on securing the air defence of Damascus, primarily from a south-westerly direction, and propose a complete materiel re-equipment of the Syrian radar network using Soviet and Eastern Bloc technology, including a timetable for build-up, training of personnel and the need for spare parts for 10 years of operation. Subsequent discussions with the Syrians regarding this matter were discontinued from the Syrian side, and thus the work of Czechoslovak officers on the study was stopped. The study was apparently never finished.[13]

Although Syria ordered 20 MiG-15bis and four MiG-15UTI aircraft, just months before their delivery the Syrian Arab Air Force leadership started to consider whether Syrian airfields were suitable for their operation. The matter was already acute because reconstruction of Hama Air Base was underway, and Syria wanted to be sure there would be no future problems related to the operation of new jet airplanes. Therefore, in August 1956, the Syrian delegation asked HTS officials to dispatch specialists with expertise in airfield design and construction. On 31 August, a technical group from the Military Design Institute (*Vojenský projektový ústav*) led by Lieutenant Colonel Vladimír Conk left for Syria. Other members of the team were Karel Kučera, Jiří Moisejenko (who together with Conk were a couple of weeks earlier in Egypt, where they carried out a similar job) and Major Alois Kučera.[14]

After receiving a request from Syria, the group toured airfields at Hama, Mezze, Dimas and Nayrab. The recently executed reconstruction of Hama airfield (with runway 28-10 lengthened to 2,500 metres/8,202ft) was assessed as suitable for the new MiGs. Mezze Air Base was used for civilian air traffic, but its main runway 06-24 (2,550 metres/8,366ft long) was found to be capable of MiG operations in its current condition. However, Dimas was said to be not suitable, largely because of its short runway (1,700 metres/5,577ft), and its geographic location meant that its reconstruction would be prohibitively expensive, so the operation of jet fighters would be possible only with difficulty. The next airfield surveyed, Nayrab (the military side of Aleppo International Airport), was also evaluated as unsuitable for MiG operations due to its short runway (2,100 metres/6890ft). Consequently, Syria

Czechoslovak Air Force advisory team at Dikhelia Air Base on 14 July 1956. Standing from left: Hladil, Saksún, unknown Syrian or Egyptian officer, Meduna (commander of the group), Drmota, Lysoněk; the bottom row from left: Macek, Čech, Břečka, Werner. (Jaroslav Čech via Miroslav Irra)

The accommodation of Major Meduna's advisory group at Abu Suweir Air Base. (Jaroslav Čech via Miroslav Irra)

asked the Czechoslovak experts for a review of Kweres Air Base near Aleppo, situated in the vicinity of Rasin El Aboud. This site also received an unsatisfactory assessment because its runway was just 1,900 metres (6,234ft) long. Nevertheless, its geographic surroundings were more favourable, so with proper reconstruction, the base had better prospects for the operation of MiG-15 fighters or Il-28 bombers than Nayrab. The Czechoslovak experts preferred that Nayrab be used for civilian traffic only and to rebuild the site at Rasin El Aboud. After preparing an overall review (including a re-examination of Hama's reconstruction and brief proposals for the reconstruction of Nayrab and Kweres) for the Syrian Arab Air Force leadership, the Czechoslovak specialists returned home on 1 October 1956.[15]

Jiří Moisejenko later returned to Syria, serving there as an advisor for airport construction in 1957.[16]

THE LOSS OF CAPTAIN JOSEF SAKSÚN

In the meantime, the aviation advisory team was busy training Syrian Arab Air Force personnel in Egypt due to the fact that, at the time, there was no suitable airfield for the operation of MiG-15bis fighters in Syria. Under the leadership of Major Josef Meduna, it was a part of the Czechoslovak aviation advisory group in Egypt led by Major General Jan Reindl. Meduna's team arrived at Almaza Air Base on 11 July 1956, and the next day were transported to Dikhelia Air Base, where the first stage of the training was conducted.

The Czechoslovak instructors started their work with the preparation of a teaching programme for the Syrian personnel, who totalled 86 men (15 instructor pilots, 44 aircraft technicians, eight radio equipment technicians, four electrical equipment technicians and 15 weapons technicians). Teaching materials such as manuals, drawings or diagrams were due to be delivered from Czechoslovakia. However, Czechoslovak military bureaucracy then reared its ugly head. Not only was all of this provided late, but someone came to the bizarre conclusion that such materials contained secret information and had to be kept outside the reach of Syrians. Therefore, they were put in a safe in the office of the Czechoslovak military attaché in Cairo! With no other option, the Czechoslovak instructors had to prepare all materials for their lectures from scratch, including creating their own diagrams and sketches.

The actual training course was initiated on 25 July with theoretical schooling that was to last until the end of August. It had already been proved that the number of Czechoslovak interpreters was unsatisfactory for such a large group of foreign soldiers, and an additional one had to be called up in early August to meet the schedule of the training. After a negative experience with catering at Dikhelia Air Base, the ranks of Meduna's group were expanded with a cook from September. Meanwhile, factory technicians assembled four Syrian MiG-15UTIs, and Major Meduna, Captain Saksún and 1st Lieutenant Hladil overflew three of them to Kabrit Air Base – the planned location of flight training. The other dual-seater was then partially disassembled and served at Dikhelia as a teaching aid for Syrian technicians. However, a foreign naval task force was detected some 20 miles off the Egyptian coast near Alexandria. International tensions were already rising before the Suez War, and Dikhelia Air Base was duly put on alert. During the night of 13/14 August, the Czechoslovak instructors started to put the remaining MiG-15UTI (c/n 612792) together in order to prepare it for immediate departure to the Egyptian interior.[17]

One of Major Meduna's advisors, electrical equipment technician Lieutenant Jaroslav Čech, standing at the Suez Canal in civilian suit. (Jaroslav Čech via Miroslav Irra)

The work, including an engine test run, was completed on 14 August around 4:00 a.m., and the aircraft was thoroughly inspected during the morning. During the next day, a demonstration inspection of aircraft and engine (including two engine test runs) was performed in the frame of theoretical training of Syrian technicians. Instructor pilot Captain Josef Saksún was ordered to undertake a test flight of the aircraft on 16 August. Although Major Meduna expressly told him not to perform any aerobatics, Captain Saksún decided to execute two sets of manoeuvres, according to the standard practices of the Aircraft Repair Plant Kbely (*Letecké opravny Kbely*). After taking off at 11:20 a.m., he carried out a low pass over Dikhelia Air Base, climbed to 4,000 metres (13,123ft) and executed a first aerobatic set (split S, Immelmann turn and loop) flawlessly. He continued with a second set, starting with a loop followed by an Immelmann turn. After flying upside down, he swiftly pulled the stick back and went into a steep dive. However, he lost consciousness and the MiG hit a salt lake near the air base at full speed at 11:35 a.m. The aircraft exploded some 3km (2 miles) from the airfield and started to burn, Saksún perishing in its remains. An investigation named two main reasons for the crash – the dazzling

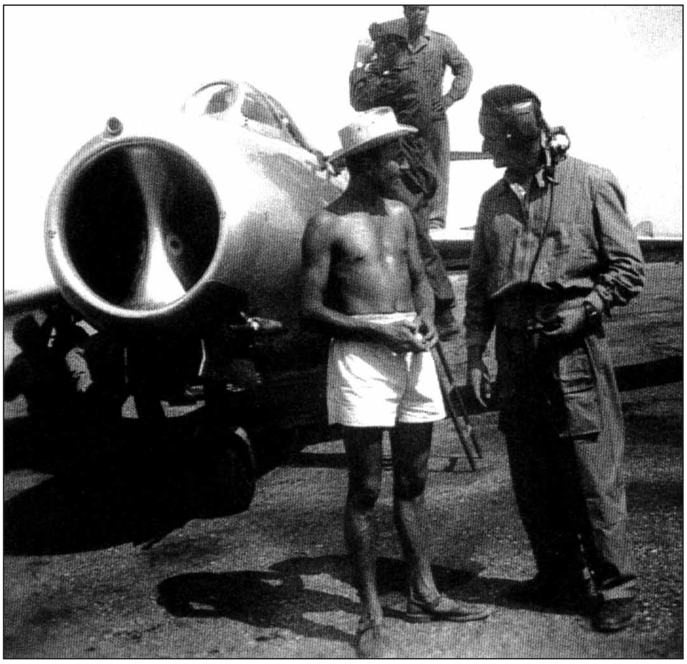
The crash site with wreckage of Captain Saksún's MiG-15UTI, in the salt lake near the Dikhelia Air Base, on 15 August 1956. (VÚA-VHA Praha)

of the pilot by the surface of the salt lake (the Egyptians did not inform the Czechoslovak pilots of specifics related to flying around Dikhelia, with the adjacent Mediterranean Sea and salt lake) and the loss of consciousness caused by an abrupt manoeuvre. It was assumed that the loss of consciousness was also influenced by high temperatures, which reached 45°C (113°F) in the shade, and the unsuitable diet at the air base.[18]

As a replacement for Captain Saksún, instructor pilot 1st Lieutenant Jiří Kunc was called up. From 28–31 August, Syrian personnel passed theory exams with excellent results for pilots and radio equipment technicians, and good results for the rest of the Syrian Arab Air Force cadre. Although the start of flying training was planned for early September, even in the middle of the month it was still not decided where this would take place. During this time, the Czechoslovak instructors continued with theoretical training of the Syrians at Dikhelia, while factory technicians from Středočeské strojírny (the previous name of Aero Vodochody) assembled MiG-15bis aircraft from recently delivered crates.[19]

Flying training was eventually transferred to Abu Suweir, a recently vacated RAF station near Ismailia. Because of the constant presence of a British maintenance team and regular arrivals and departures of British military and civilian aircraft, it was impossible to maintain the secrecy of the Czechoslovak advisory group. The training was also hampered by the fact that the Syrians had to borrow most of their ground support equipment and spare parts from the Egyptians. Moreover, the training had to be stopped completely from 25–30 October because of the lack of RX52 aviation fuel. Then the Suez War broke out. Thereafter, the Czechoslovak team assisted with advice in the preparation of Syrian and Egyptian MiG-15bis aircraft for combat deployment, including an alert during the night of 29/30 October.[20]

On the following night, Czechoslovak military attaché Colonel Jaroslav Knébl ordered the evacuation of all Czechoslovak advisors from Abu Suweir to Cairo. Just three hours after their departure, Abu Suweir Air Base was the target of an enemy airstrike. Subsequently, on 2 November, the Chief of the General Staff, Colonel General Václav Kratochvíl, issued an order which strictly prohibited the participation of Czechoslovak instructors in combat operations. They witnessed some 42 air raids in the area around Cairo during the next couple of days. On 2 November, it was decided to move



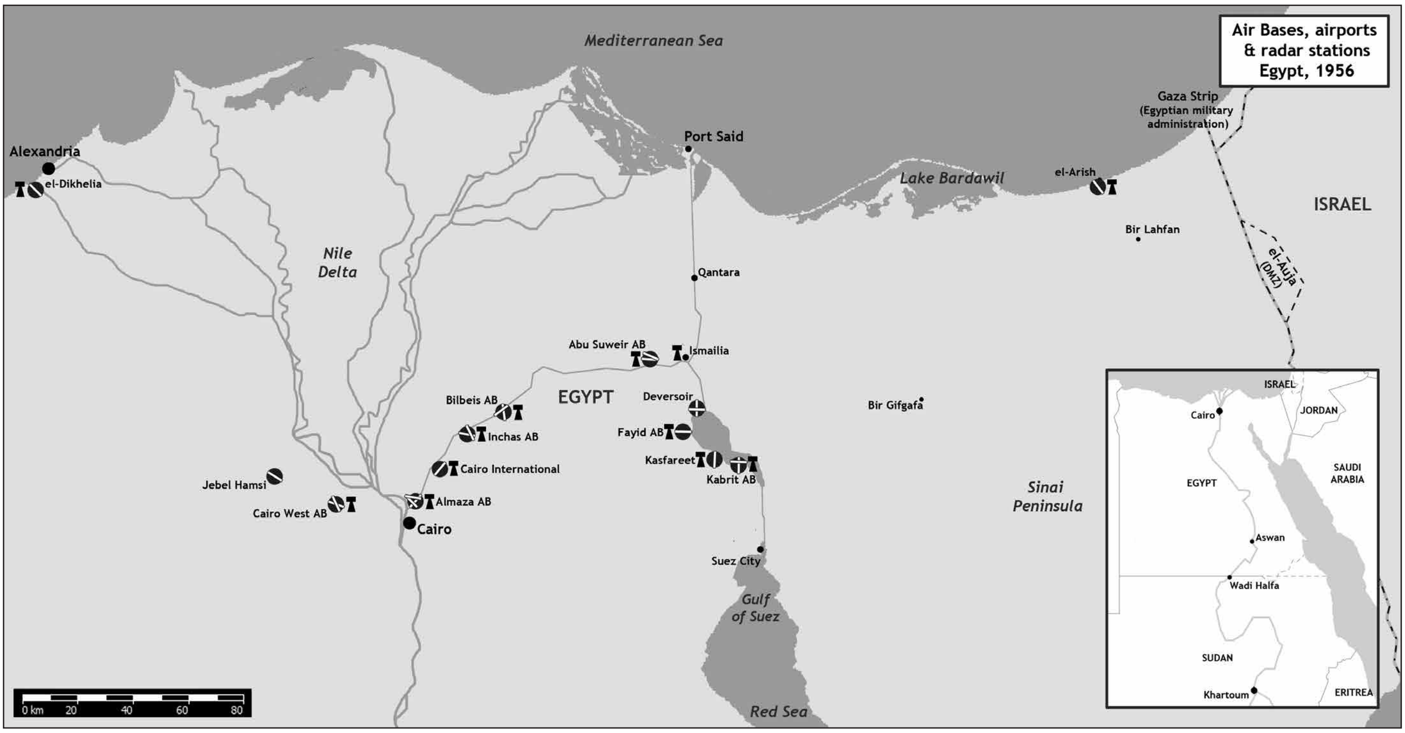
Instructor pilot 1st Lieutenant Jiří Kunc (right) and technician Lieutenant Jaroslav Čech standing in front of a MiG-15bis at Abu Suweir Air Base. (Jaroslav Čech via Miroslav Irra)

all Czechoslovak citizens (except for certain diplomats and the most essential embassy personnel) from Egypt to safety. Meduna's advisors were part of the main evacuation transport from Cairo to Wadi Halfa in northern Sudan. After a long trek lasting several days on board a train (from Cairo to Aswan), ship (from Aswan to Wadi Halfa) and several aircraft (from Wadi Halfa to Prague), a total of 154 evacuated Czechoslovaks returned home by 22 November. Meduna, together with the most of his team, arrived at Ruzyně International Airport on 18 November.[21]

While Meduna's group managed to fully train the Syrian technicians, pilots were trained only in independent flying on MiG-15bis aircraft without combat use, not to mention their unfulfilled training as MiG-15UTI instructors (which was initially planned to terminate the training course at the end of November).[22] As the new MiGs of the Syrian Arab Air Force were destroyed in Egypt, Syrian officials did not request the Czechoslovak Ministry of National Defence to continue the pilot training programme. Moreover, Syria cancelled delivery of all contracted, but not yet supplied, spare parts for MiG-15bis fighters, except those that could be used on MiG-17s.[23]

Table 3: Czechoslovak Aviation Advisory Group for the Training of Syrian Arab Air Force Personnel in Egypt (11 July 1956 – 18 November 1956)[24]

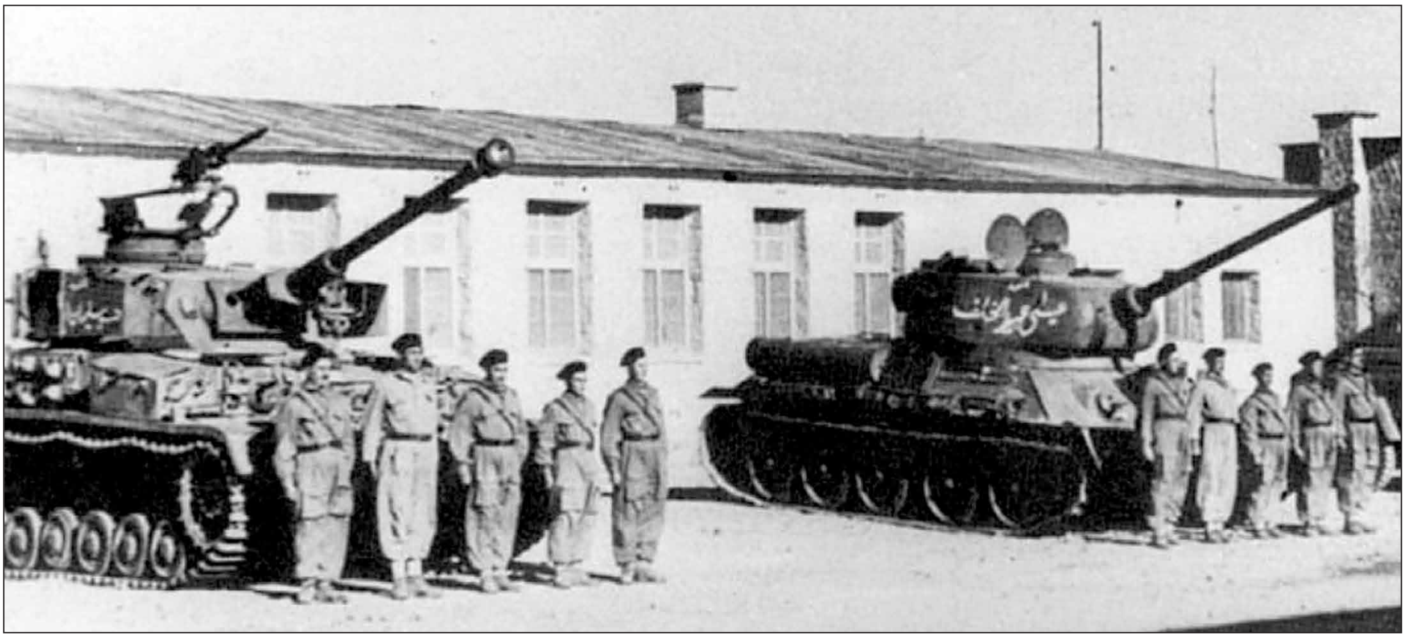
Rank and name	Position
Major Josef Meduna	instructor pilot, commander of the group
Captain Josef Saksún	instructor pilot, died in a crash on 16 August 1956
1st Lieutenant Pavel Hladil	instructor pilot
1st Lieutenant Jiří Kunc	instructor pilot, from 1 September 1956
1st Lieutenant Josef Drmota	aircraft technician
Lieutenant Václav Břečka	aircraft technician
Lieutenant Jaroslav Čech	electrical equipment technician
Lieutenant Josef Šus	weapons technician
Lieutenant Josef Macek	radio equipment technician
Josef Lysoněk	interpreter
Pavel Werner	interpreter
Jožka Špelina	interpreter, from 1 August 1956
Captain Jiří Heller	doctor, from 1 September 1956
Warrant Officer Josef Doulík	cook, from 1 September 1956


Mediterranean Sea
Air Bases, airports & radar stations Egypt, 1956
Gaza Strip (Egyptian military administration)
Alexandria
el-Dikhelia
Port Said
Lake Bardawil
el-Arish
ISRAEL
Bir Lahfan
el-Auja (DMZ)
Nile Delta
Qantara
Abu Suweir AB
Ismailia
EGYPT
Bilbeis AB
Deversoir
Bir Gifgafa
Inchas AB
Fayid AB
Kasfareet
Kabrit AB
Cairo International
Jebel Hamsi
Cairo West AB
Almaza AB
Cairo
Sinai Peninsula
Suez City
Gulf of Suez
Red Sea
0 km 20 40 60 80
ISRAEL
JORDAN
Cairo
SAUDI ARABIA
EGYPT
Aswan
Wadi Halfa
SUDAN
Khartoum
ERITREA

Map of air bases and radar stations in Egypt as of 1956. Those used for the training of Syrian personnel were Dikhelia (Alexandria), Almaza (Cairo), Kabrit, and Abu Suweir. Inset is shown the position of Wadi Halfa, in northern Sudan, where Czechoslovak team was withdrawn (via Aswan) during the Suez War of 1956. (Map by Tom Cooper)

Table 4: Syrian military personnel trained at Antonín Zápotocký Military Technical Academy in Brno during 1956[25]

Course	Name	Arrival	Departure
1/104 vz. 44: description, maintenance, firing theory	Abdul Wadoud Toutounji	15 March	13 May
2/104 accessories of vz. 44, PUAZO-4a, DJA-6: description, maintenance, operation, firing theory	Said Tayan	15 March	14 May
3/104 SON-4: description, maintenance, operation	Tarak Yousif	15 March	13 May
5/105 vz. 38, vz. 31/37, vz. 51: general overhauls 6/104 artillery ammunition: construction, assembly, maintenance	Youssef Salhi Ismail	10 September	15 November
	Mohamed Hassan Homsi	10 September	15 November
	Zabian Hassan Fouad Mohamed Rida	10 September	3 November
	Adnan Moustafa Jamal	10 September	3 November
	Mardini Ala El Dine Abdul Halim	10 September	3 November
7/104 T-34/85 and SD-100 guns, 37mm air defence gun: general overhauls	Bared Selim Ghani Mael	10 September	18 December
	Allaf Nadim Mahmoud	10 September	18 December



Crews of the 70th Armoured Brigade proudly standing at attention in front of their mounts acquired from Czechoslovakia: visible to the left is a PzKpfw IV, to the right a T-34/85. (Albert Grandolini Collection)

PROBLEMS WITH TRUCKS

In total, until the end of 1956, 41 Czechoslovak and three Soviet military specialists (including interpreters) were sent to Syria. A further nine training courses for 21 Syrian soldiers took place at military installations across Czechoslovakia: crew training for vz. 44 anti-aircraft guns, PUAZO-4a fire control directors and SON-4 fire control radars; training in the operation of SD-100 self-propelled guns;[26] and training in repairs of artillery weapons. Related training courses at the Antonín Zápotocký Military Technical Academy (*Vojenská technická akademie Antonína Zápotockého*) are listed in Table 4.[27] During the first half of the next year, just one Czechoslovak and two Soviet military advisors served in Syria.[28] The Czechoslovak People's Army carried out only one training course on Czechoslovak soil for six Syrian soldiers during the same period.[29] In the spring and summer of 1957, a group of Soviet advisors stayed in Syria to reorganise local armed forces, establish a military education system and propose military training programmes.[30]

In the middle of 1957, the Czechoslovak Ministry of Foreign Trade and Ministry of National Defence could be generally satisfied with the flow of arms to Syria and the outcome of training of Syrian soldiers. Except, that is, for the situation regarding Czechoslovak military trucks. The Czechoslovak embassy in Damascus received the first hints in late February or early March 1957 that Tatra 111 vehicles were not running properly. One official, apparently in a paranoid state of mind, even suggested that the "possibilities of sabotage cannot be excluded". Shortly thereafter, one Czechoslovak technician from the Motokov foreign trading company witnessed himself that army drivers had absolutely no clue how to operate the

A pair of Praga V3S trucks seen during a military parade in Damascus of 1966. (via Martin Smisek)

Field Marshal Abdel Hakim Amer – Minister of War and Chief-of-Staff Egyptian Army as of 1956 – shaking hands with two of the Czechoslovak instructors in 1956. (Albert Grandolini Collection)

trucks correctly, which was leading to regular malfunctions and breakdowns.[31] These findings were confirmed by a Czechoslovak military delegation that visited the Syrian automobile transport battalion using Tatra 111 and Praga V3S trucks in June that year. Czechoslovak officers could clearly see that Syrian Army drivers and mechanics (including their commanders) operating and repairing Czechoslovak trucks had only minimal ability due to a lack of proper training. Moreover, they experienced that "Czechoslovak automobile materiel is unpopular with [some] military authorities in Syria and characteristics of vehicles from US production are emphasised intentionally at every opportunity".[32]

The Syrian Ministry of Defence, aware that all was not running smoothly, awarded a contract to the HTS for the training of 20 Syrian Arab Army technicians.[33] Thus, from November 1957, two groups – each composed of 10 Syrian NCOs, underwent technical training in Czechoslovakia. The first team was trained in automobile and motorcycle repairs on GAZ-69, Tatra 111, Tatra 805, Praga V3S, JAWA 250 and JAWA 500 vehicles at the Automobile Training School (*Automobilní učiliště*) in Nitra under the cover name Course 156,[34] while the second group went through a tank repair course (medium and general overhauls of T-34/85s and SD-100s) under the code name Course 157 at the Mobile Tank Repair Shop of the 14th Mechanised Division (*Pojízdná tanková opravna 14. mechanizované divize*) in Šternberk, the 25th Tank Repair Plant (*25. tankový opravárenský závod*) at Nový Jičín and the 5th Artillery Base (*5. dělostřelecká základna*) in Brno.[35] The tank technicians made detailed notes during their lectures and tried hard to learn the maximum amount of their subject matter of their courses, which lasted until June (Course 156) and July 1958 (Course 157). Two tank technicians remained in Czechoslovakia for a further three or four weeks to go through further practical training at three plants producing electrical accessories for civilian and military vehicles.[36]

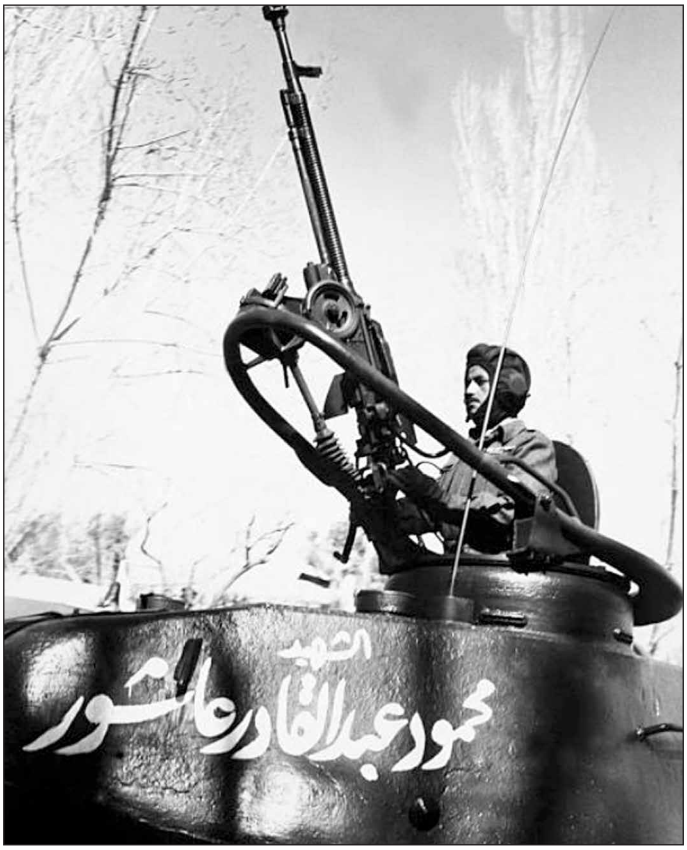
However, some of the Syrian complaints about the trucks were entirely legitimate. For example, due to the appalling manufacturing quality at the plants of the truck maker Liberecké automobilové závody, the Škoda 706 vehicles delivered were suffering serious engine breakdowns. This became a matter of numerous Syrian complaints during 1961. Left with little option, the Czechoslovak Ministry of Foreign Trade proposed to completely change the engines of 88 trucks of the Syrian Arab Army.[37]

3

MILITARY ASSISTANCE IN THE TIMES OF THE UNITED ARAB REPUBLIC

The United Arab Republic was established on 1 February 1958, with Egypt and Syria joining together as the first step towards a larger pan-Arab state. Egyptian leader Gamal Abdel Nasser became the new republic's president and soon ordered a crackdown against Syrian communists, with the General Secretary of the Syrian Communist Party, Khalid Bakdash, consequently having to leave Syria. He lived in exile in Czechoslovakia from early 1958. From the beginning, the Czechoslovak communist leadership was not very enthusiastic about his presence, being afraid that Bakdash's stay in the country could complicate relations with Nasser. Bakdash lived with his family in a Prague villa belonging to the ÚV KSČ, which also arranged a cleaning lady and a cook for him. He was allowed to use Czechoslovak diplomatic ciphers for communication with his comrades in Lebanon. Bakdash remained in Prague until at least the end of 1961 but was not very popular among officials of the ÚV KSČ because of his constant financial demands.[1]

The intelligence services of the United Arab Republic apparently never discovered Bakdash's presence in Czechoslovakia, and thus diplomatic relations between Prague and Cairo were not affected. Military assistance could, therefore, continue. Syrian soldiers were part of several groups that underwent military training under Czechoslovak supervision either in Czechoslovakia or in Egypt. However, Syrians usually constituted only a very minor part of the trainees (these groups were usually composed of five to eight Egyptians and just one Syrian).[2] The only exception was the training of five Syrians in two courses for the Syrian ammunition maintenance facility in 1959. Most of the latter training courses contracted by Damascus in 1956 and 1957 were cancelled after the establishment of the United Arab Republic, when the responsibility for the training of Syrian troops was taken over by the Egyptians.[3]



Commander of a Syrian T-34/85 tank imported from Czechoslovakia, with the unique mount for the DShK heavy machine gun (used for air defence purposes), atop of a turret of his vehicle. (Albert Grandolini Collection)

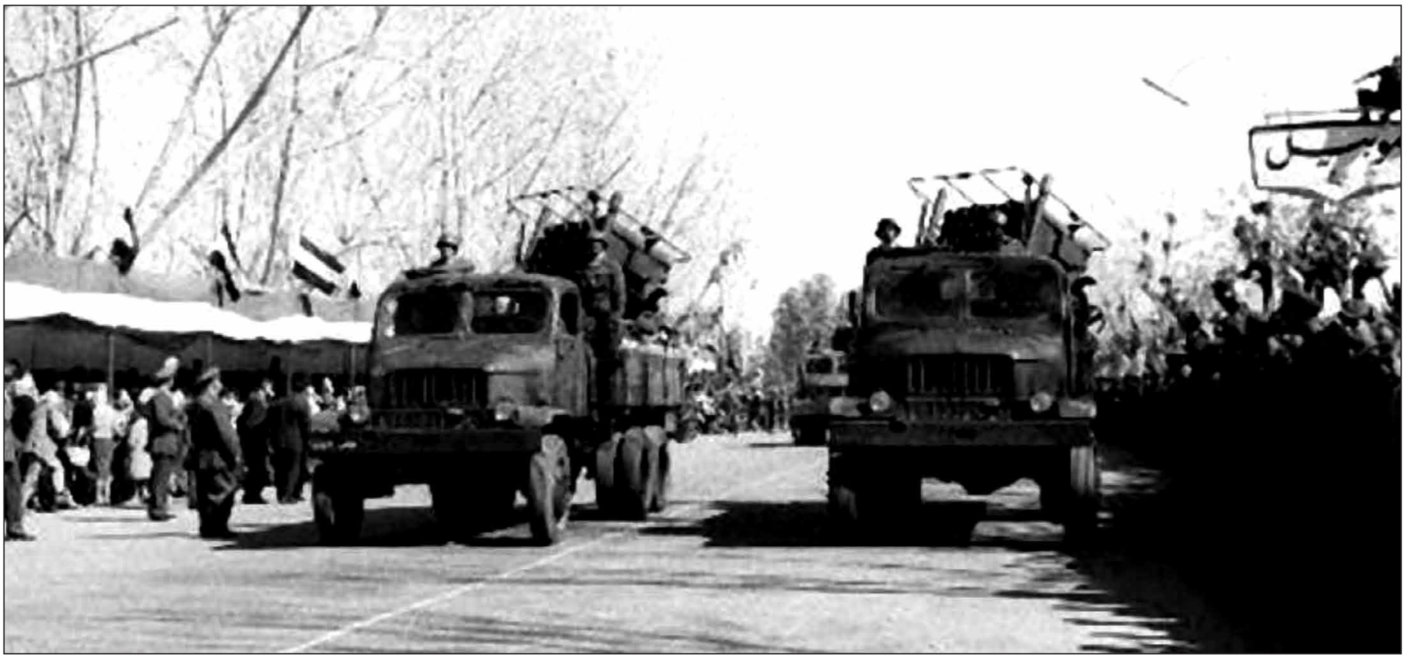
During the times of the United Arab Republic, a political union of Egypt and Syria, deliveries of arms from Czechoslovakia were basically limited to providing spare parts for already delivered armaments in the frame of a contract signed on 18 July 1960. Contracted items were supplied directly to the Egyptian port of Alexandria. The only exception was the delivery of spare parts for vz. 51 multiple rocket launchers directly to the Syrian port of Latakia, besides, 124 7x50 binoculars delivered to Syria in 1959.[4]

Czechoslovak instructors continued to serve in Syria, but again on a limited scale. On 31 January 1958, just before the establishment of the United Arab Republic, the Syrian Ministry of Defence signed Contract No. 20-05-13 for the execution of several training courses directly in Syrian military installations. Under Czechoslovak code names Course 508 to Course 513, they covered, for example, organisation of the military driving school, training in repairs of tanks, instruction in the storage of ammunition and explosives or training in storage, maintenance and repairs of small arms and artillery optical devices. In the end, however, only Course 508 (operation and maintenance of Czechoslovak trucks and motorcycles) was carried out, the rest being cancelled.[5]

One Czechoslovak officer (Captain František Stejskal) and one interpreter (Štefan Zich) left for Syria on 22 October 1958 for an eight-month stay, being dispatched to military workshops at Bab Sharka. Their first training course, attended by three officers and NCOs, was completed on 12 February 1959. High-ranking Syrian officers submitted additional requests, such as translations of Czech text as teaching aids for T-34/85 tanks, analysis of engine breakdowns or assistance in the organisation of repair workshops at Harasta. Some of these were fulfilled by the Czechoslovak advisors in their free time, but the remainder were turned down due to their heavy workload. František Stejskal experienced first-hand the sheer Syrian incompetence in the operation of Czechoslovak military trucks caused by low and amateurish maintenance or poor-quality fuel with a high content of water. Intensive work and his deteriorating state of health, combined with Syrian mistrust and incompetence, led to the physical and mental exhaustion of Captain Stejskal. After two requests for replacement, the Czechoslovak officer was recalled home on 26 April 1959. It remains unknown whether Course 508 continued with a new training officer or if it was ended prematurely.[6]

GENERAL OVERHAULS OF TRUCKS

Course 508 was followed by Course 556 (training in general overhauls and maintenance of Tatra 111, Tatra 805, Praga V3S, Škoda 806 RS, and Škoda 906 R trucks, together with the Škoda 706 RO bus). Two advisors (František Beneš and František Jelínek, both civilian employees at the Central Automobile Repair Plant



A pair of vz. 51 multiple rocket launchers at a military parade in Damascus on 17 April 1960, Syria's national day commemorating the evacuation of the last French soldier at the end of the French mandate of Syria on 17 April 1946. (via Martin Smisek)

– *Ústřední automobilní opravárenský závod* – in Přelouč) and one interpreter (Major Josef Tichý from the editorial staff of *Obrana lidu* military magazine) arrived in Syria on 16 July 1960. They launched their stay at the Damascus military workshop with the translation of a little manual on the JAWA 500 motorcycle into French, preparing production drawings for various assembly carts and jigs for easier repairs of the trucks (they were subsequently produced in the workshop) and proposals for improving the workflow at different workplaces at the workshop. The actual training of Syrian technicians started on 16 August with simultaneous disassembly of three Tatra 111 trucks. The course on the general overhauls of these vehicles was accomplished during November. In the meantime, training in repairs of the Praga V3S was started, followed by a course on Škoda trucks in December. Again, Czechoslovak instructors had to design assembly jigs in their free time so these could be manufactured in the local workshop because they were badly needed for disassembly and assembly of some vehicle subsystems.[7]

It was just during instruction for one Praga V3S that the Czechoslovak advisors discovered that the vehicle had spring seats for the front axle welded on only two points. In Czechoslovakia, this was a well-known feature of early manufactured trucks. However, after early experiences, this was considered a technical defect because the joint was weak. While defective Praga V3S trucks serving in Czechoslovakia were repaired, the Syrians apparently never received any information about this problem. Czechoslovak instructors were wondering how this could have happened when the Syrians asked them to inspect a recently crashed Praga V3S. When they saw the truck with the front axle torn off, it was clear for them what had happened. Checking the vehicle, they indeed could see spring seats welded on just two points. Unwilling to damage Czechoslovakia's reputation, the advisors remained quiet and said nothing about the reason for the crash to Syrian officers. However, they immediately hurried to the garage to tell Syrian technicians how to repair the front axle on vehicles present in the workshop.

The issue became a pressing one because, by the end of November, a further two crashes due to the same reason were reported. Moreover, the Syrian Arab Army received vehicles in older and newer versions at the same time, so they would be able to determine the cause of the crashes themselves. The Czechoslovak instructors promptly informed Czechoslovak officials about the worrying situation. However, it remains unknown how successful the subsequent Czechoslovak cover-up and damage control process was. Nevertheless, Course 556 was planned to be terminated on 15 January 1961.[8]

4

SYRIAN SECESSION FROM THE UNITED ARAB REPUBLIC

Unfortunately for Syrian proponents of the project, the United Arab Republic never became a federation of two equal Arab peoples. The political enterprise turned into a centralised, autocratic military dictatorship dominated by Egypt. Nasser's socialistic political and economic system imposed on the weaker Syria (officially the Northern Region of the United Arab Republic) created a backlash among Syrian business and army circles, which resulted in a Syrian coup on 28 September 1961.

The newly independent state changed its name to the Syrian Arab Republic (to demonstrate its commitment to the Arab nationalist cause), with its government including a mix of military officers and traditional Syrian elites who promised to maintain some of Nasser's progressive and socialist policies. This development was greeted with suspicion within the Soviet Bloc, Czechoslovakia included. The new regime was considered by Czechoslovak communists to be "right-wing and bourgeois".[1] Nevertheless, this changed nothing in Syria's desire to buy military technology and assistance from Czechoslovakia. On 18 October 1961, newly appointed Syrian Prime Minister Maamun al-Kuzbari asked Prague for the education of 59 officers so they could graduate in Czechoslovakia with a master's degree. Thirteen of them would be former students of the Military Technical College (MTC) in Cairo (in total, 39 Syrians interrupted their study there and returned to Syria after the dissolution of the federation).[2] Because of the already stretched capacity of the Antonín Zápotocký Military Academy (*Vojenská akademie Antonína Zápotockého,* VAAZ) in Brno, the Chief of the General Staff of the Czechoslovak People's Army, Lieutenant General Otakar Rytíř, did not recommend acceptance of the Syrian request in January 1962.[3]

On 4 November 1961, a General Samam arrived in Prague to discuss deliveries of spare parts contracted on 18 July the previous year for the United Arab Republic.[4] While he demanded the delivery of the share originally indented for Syria, the Egyptians wanted, at least for the time being, to keep all the spare parts for themselves. This clearly complicated the Czechoslovak situation. Taking possible Soviet interests into consideration and just wanting to be sure of the best course of action, Prague informed Moscow that it was ready to stop all deliveries until the solution of the *status quo*. The matter was eventually sorted out during subsequent discussions, with supplies flowing separately to Egypt and Syria. Moreover, the Syrians obtained parts for vz. 43 anti-tank guns that were also received by Egypt during the time of the United Arab Republic.[5]

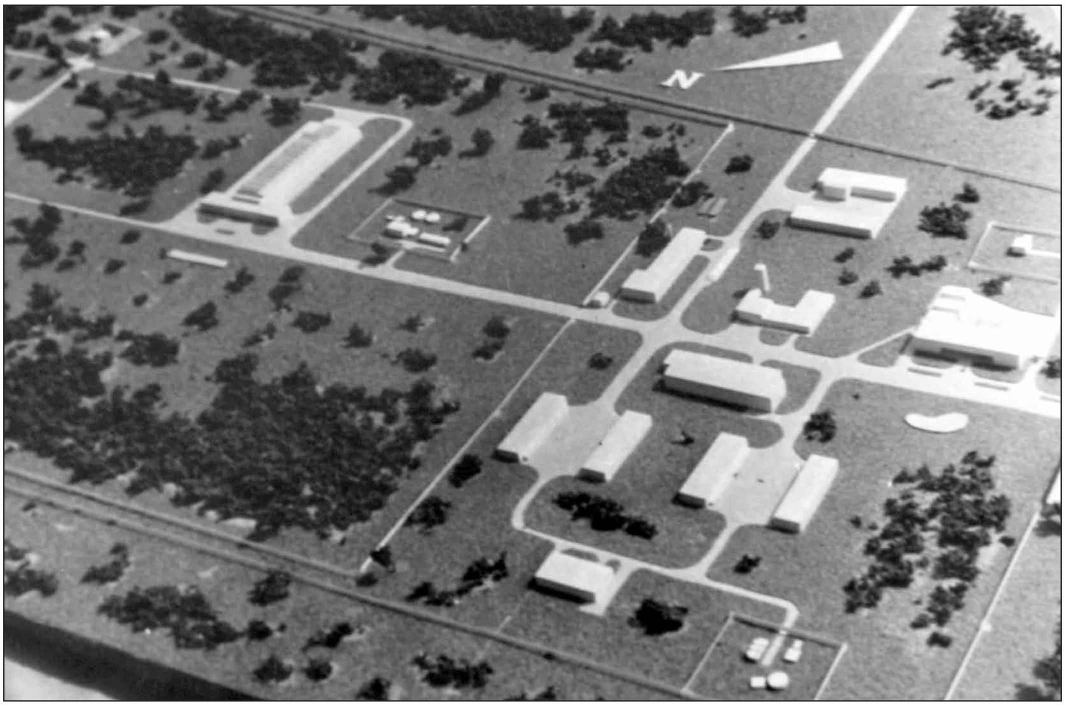
It can be assumed that Czechoslovak officials experienced a great sense of relief when, on 16 November 1961, one of the local Soviet military representatives, Colonel Strakhov, notified Prague that Moscow was ready to provide arms and military training to the Syrian Arab Republic. This meant that nothing was now in the way for Czechoslovakia to secure future arms deals with Syria.[6]

MILITARY REPAIR PLANTS AND THE AIR ACADEMY

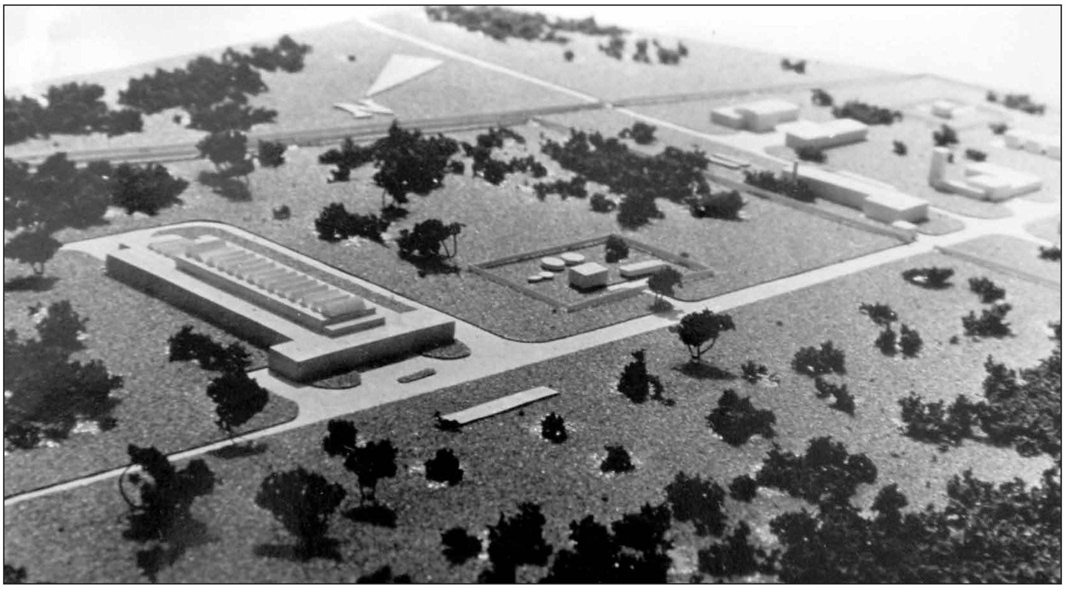
Just before the end of the year, in December 1961, another Syrian delegation showed up in Czechoslovakia with a request for the construction of several military repair plants. According to the official Syrian statement, after their secession from the United Arab Republic they lost the capability to repair some of the military hardware delivered from Czechoslovakia, which threatened the regular training of the Syrian Arab Armed Forces and their combat readiness. After lengthy negotiations, an agreement worth 44.3 million CSK (£2.2 million) was signed in Prague on 21 July 1962, covering the design of four facilities (see Table 5) and including the delivery of all equipment and devices needed for their operation, together with technological documentation for realisation of repairs. Training courses for future Syrian personnel working in these facilities were also incorporated. Thus, Czechoslovakia provided not only the 'hardware' but the know-how for proper operation of these installations. Deliveries were planned for 1963–65, while Syria was to pay for them in five instalments between 1962 and 1966, each of them with 25 percent in British pounds and the rest in goods such as cotton, wool, cereals or sheep intestines. The supply of equipment and machinery from Czechoslovakia to Syria for the repair plants began in 1965 and continued until 1973. Because of several delays, caused mostly by the Syrian inability to finish construction of

Table 5: Military repair plants for Syria, under agreement from 21 July 1962[8]

Installation	Czechoslovak cover name	Contract	Czechoslovak main contractor
automobile repair plant	Operation 7413	No. 20-23-33	Odbyt strojů a nářadí
armament repair plant	Operation 7415	No. 20-20-33	Závody Jana Švermy
communication equipment repair plant	Operation 7418	No. 20-22-33	Tesla Pardubice
ammunition maintenance facility	Operation 7419	No. 20-21-33	Adamovské strojírny, závod Dubnica nad Váhom



One of the models prepared to show the facilities of 'Operation 7419' – the ammunition maintenance plant constructed by the Czechoslovaks in Syria under the contract signed on 21 July 1962. (VÚA-VHA Praha)

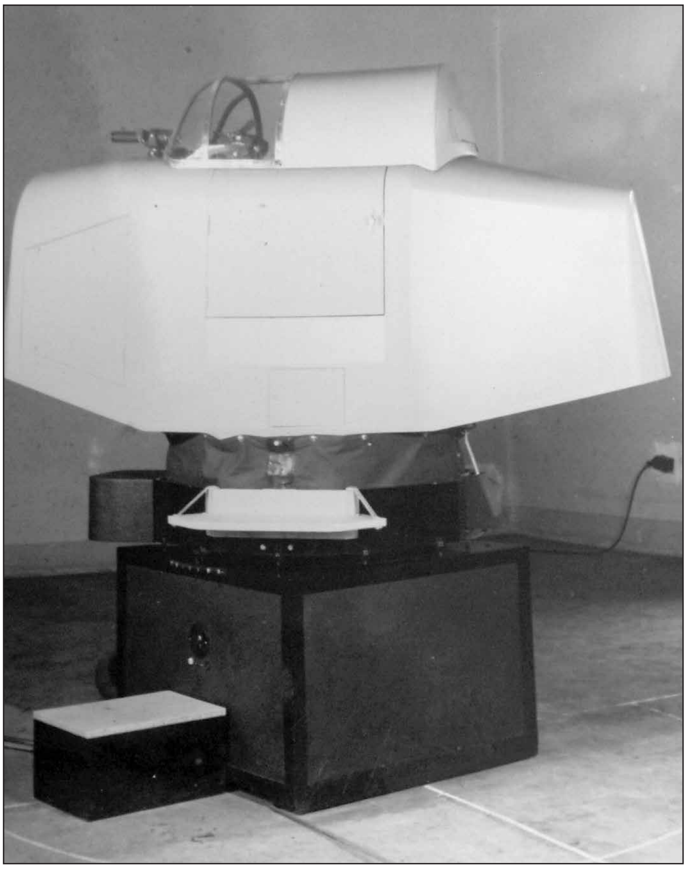


Another view of the same model, showing the main hall of the ammunition maintenance facility. (VÚA-VHA Praha)

buildings to a deadline, the facilities only started their initial activity during the first half of the 1970s.[7]

Although Syria only paid the last instalment for Czechoslovak arms delivered between 1956 and 1958 in March 1963, the leadership of the Syrian Arab Air Force had plans to spend further large sums of money during spring 1962. After approval from the Politburo ÚV KSČ was given on 22 May 1962, a military delegation led by Lieutenant Colonel Vladimír Ustohal, an officer from the Military Design Institute, visited Syria between 24 May and 18 June to discuss Syrian requirements for the design of a flight training school and aircraft technicians training centre, together with the delivery of relevant teaching aids for both facilities. During numerous meetings with high-ranking Syrian Arab Air Force officers (including its Commander-in-Chief, General Wadih Moukabari, Chief-of-Staff General Louis Dakkar and Chief Engineer General Fawaz Abou-Alwan), possibilities for the organisation of Czechoslovak-led training courses in Syria and Czechoslovakia were discussed too.

On 29 May 1962, Czechoslovak officers toured Kweres Air Base near Rasin El Aboud, east of Aleppo, the training facility of the Syrian Arab Air Force, in order to assess its condition. Kweres had already served for training purposes before the formation of the United Arab Republic, until the Egyptians disbanded the local training centre. When Syria reacquired its independence, the Syrian Arab Air Force reopened Kweres for the training of its new pilots and aircraft technicians. Nevertheless, its disposition could be described as rudimentary at best, with a barely suitable runway, restored ramp and manipulation areas, two hangars and one underground storage tank for some 70,000 litres (15,398 Imperial gallons) of fuel. Only elementary flight training of pilots was performed on de Havilland Canada DHC-1 Chipmunk aircraft (according to an estimate by Czechoslovak officers, some 40 examples served in Kweres at that time). The equipment of the local pilot school was very modest, and for teaching was absolutely inadequate. Two flight simulators were installed, including a Czechoslovak PCK-53 system

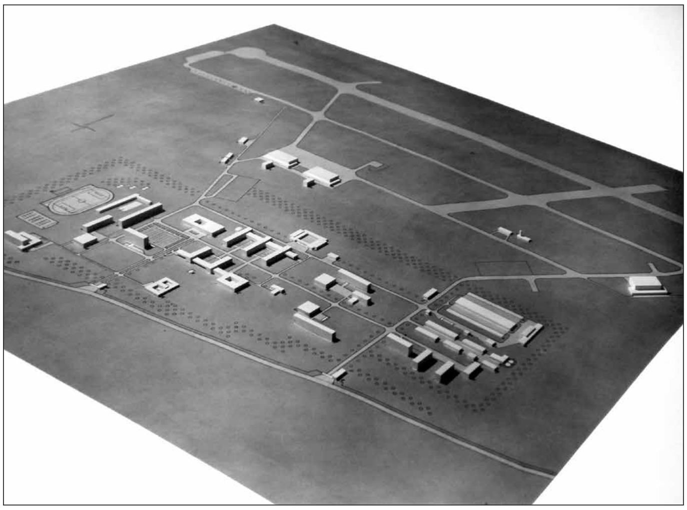


A PCK-53 simulator stored at Kweres Air Base was probably the example which was originally delivered to Egypt in 1959. At the time Egypt and Syria were integrated in the United Arab Republic. (VÚA-VHA Praha)

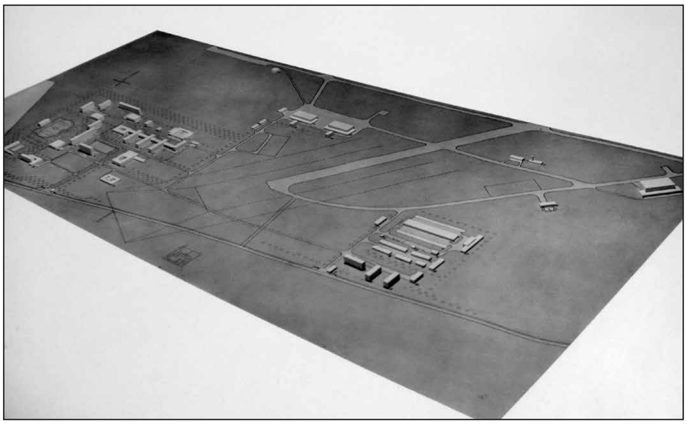
for the MiG-15 that was never brought to working condition because of the absence of technical documentation required to put it into operation. Moreover, technical classrooms "made an impression of a warehouse of parts dismantled from wreckages".

With Czechoslovak assistance, the Syrian Arab Air Force leadership wanted to rebuild Kweres into a brand-new air academy for the training of pilots, navigators and aircraft technicians. According to official statements of the Syrian military leadership, since previous assistance by the Czechoslovak People's Army was held in such high esteem, the Syrian Arab Air Force decided to approach only Czechoslovakia with a request for the establishment of the new training facility. General Moukabari intended that the reconstructed Kweres would function as a leading institute for training of personnel from all Arab air forces.[9]

This project was of the highest priority for the Syrian Arab Air Force. However, the Czechoslovak capacity for the realisation of such a task was stretched to the limit. The Czechoslovak HTS was not able to find any contractor willing to participate in the scheme. When General Moukabari visited Czechoslovakia in early December 1962,[10] he was interested in seeing a Czechoslovak proposal for the air academy. After being told that nothing like that was currently possible, he was frustrated to such an extent that he questioned Czechoslovak interest in participation in the establishment of the academy.[11] Eventually, the project for the Syrian air academy received the Czechoslovak cover name Operation 7414 and was finished by the Military Design Institute in Prague in February 1963, with two suggested alternatives. The project included not only the layout and design of actual buildings, but their technical equipment, teaching aids and organisational structure of the air academy.[12] The main Czechoslovak contractor for the project was to be Odbyt strojů a nářadí. However, it was not to be. Despite their initial assurances, the Syrians turned to other potential suppliers; in the end, they selected a cheaper Polish offer.[13]



Variant A1 for the design for the Syrian Arab Air Force Academy at Kweres, as developed by Czechoslovak military architects, within frame of Operation 7414. (VÚA-VHA Praha)



Variant B1 of the design for the same facility. Ultimately, HTS proved unable to find any Czechoslovak company willing to participate in construction. Correspondingly, the project was realised by Bulgarian companies instead. (VÚA-VHA Praha)

STUDIES AT THE ANTONÍN ZÁPOTOCKÝ MILITARY ACADEMY

In November 1961, the Syrian *chargé d'affaires* in Czechoslovakia, General B.M. Kayal, submitted a request for study by Lieutenant Colonel Hisham Shabib at the Czechoslovak military academy. Lieutenant Colonel Shabib had already studied electronic engineering at university in the United States for three years, and then attended the Military Technical College in Cairo under the guidance of Czechoslovak professors for a further three years. Czechoslovak officials agreed to the proposal, and Contract No. 20-15-212 – worth £781 – was signed in Prague on 5 January 1962. After writing and defending his diploma thesis, Shabib attained a master's degree in electronics at the VAAZ during the same year.[14]

On 22 October 1962, two important agreements between the Syrian Ministry of Defence and the HTS were signed in Damascus. While General Contract No. 20-12-212 covered general conditions for the service of Czechoslovak military experts in Syria, General Contract No. 20-13-212 specified terms for the schooling of Syrian military personnel in Czechoslovak institutions from 1962–68. Military training courses contracted within the frame of both of these deals were based on a commercial basis, i.e. the Syrians paid for them.[15]

Long-standing Syrian interest in the education of Syrian military personnel in Czechoslovakia materialised for the first time on a greater scale in the form of Course 231. In March 1963, 40 young Syrian students, graduates of local secondary schools with five months of preparations at a Syrian military training facility, arrived in Czechoslovakia to study at the Foreign Faculty of the Antonín Zápotocký Military Academy (*Zahraniční fakulta Vojenské akademie Antonína Zápotockého,* ZF VAAZ) in Brno. After the first year learning the Czech language, general subjects and practice in handicraft, they were divided into five study groups, each with its own specialisation lasting two years (artillery technician, automobile technician, tank technician, communication equipment technician and radar technician).[16]

A first Syrian student was already close to being dismissed from the course during September 1963. Saadla Adna stated that he suffered from back pain that prevented him from attending lessons. Despite medical treatment, he claimed his pain was worse and refused to study. However, his claimed medical problems changed nothing about Adna's poor discipline and work attitude, and constant womanising. The Chief of the Foreign Faculty, Colonel Chrastil, proposed to expel him from the ranks of Course 231 to maintain the discipline and study morale of the remaining Syrians. This threat was sufficient to persuade Saadla Adna to behave more decently.[17]

Despite regular problems with the discipline of several students and their poor study results, all 40 Syrians eventually managed to graduate from the ZF VAAZ. The graduating ceremonies of the first 32 students took place on 24 and 25 March 1966. The event was attended by several high-ranking Czechoslovak and Syrian officials. On the Syrian side was Sabet Aris (Ambassador in Czechoslovakia), Colonel Barakat (military attaché in Czechoslovakia), Major Kaka (deputy military attaché in Czechoslovakia) and General Dardari (Chief of the Training Department, General Staff of the Syrian Arab Armed Forces). The Syrian graduates were promoted to the rank of lieutenant and returned home between 29 March and 4 April 1966.

During the departure of the first group, an accident took place at Ruzyně International Airport. Fresh lieutenants were transported there on a military bus, accompanied by a Major Manca. In the bus, he handed some Syrians small arms that they had bought in Czechoslovakia with the permission of Czechoslovak authorities. However, Mohamed Adel Al-Ratta started to manipulate his DUO pistol and his mishandling caused a shot that hit the head of Hasan Hanano, who was sitting in front of him. Despite swift action and medical treatment in Prague Central Military Hospital (*Ústřední vojenská nemocnice Praha*), the Syrian lieutenant died of his wounds several days later, on 5 April. Czechoslovak authorities immediately started proceedings against Al-Ratta, but because of his return to Syria on 5 April, the Czechoslovak investigation had to be terminated due to the absence of the accused.[18]

The remaining eight Syrian students of Course 231 graduated in September and December 1966.[19]

FLIGHT TRAINING AGAINST THE BACKGROUND OF A COUP

Based on Supplement No. 1, Annex No. 2 of General Contract No. 20-12-212, the Czechoslovak Air Force dispatched an advisory team led by Lieutenant Colonel Jiljí Špeta to Syria. The task of the group was to provide flying training to Syrian student pilots and work out methods and planning of elementary and advanced flying training at the aviation school at Kweres Air Base, under the cover name Course 627. The Czechoslovak team comprised five instructor pilots (Lieutenant Colonel Špeta, Major Ladislav Chaloupský, Captain Ludvík Lepiš, Captain Jiří Bárta and Major Bohuslav Orel) and one interpreter (Captain Jaroslav Nedvěd).

They left for Syria on 25 March 1963, just weeks after the coup d'état of 8 March that ended with the seizure of power in Syria by the military committee of the Syrian Regional Branch of the Arab Socialist Ba'ath Party. The situation at Aleppo was still very tumultuous at the time of the arrival of the Czechoslovak advisors. Frequent demonstrations in the streets of Aleppo during April and May had to be dispersed by police and army units. On 8 May, a large gathering erupted into riots, with several shoot-outs between protesters and security forces. Chaotic conditions also reigned at Kweres Air Base, and this, together with Syrian unpreparedness, meant the Czechoslovak advisors did no meaningful work during the first 14 days of their stay in Syria. Conditions changed on 5 April when the local commander of the flying training school, the commander of the pilot school and two squadron commanders were dismissed from the Syrian Arab Air Force. All of them were graduates of training courses in Great Britain, and their positions were assumed by officers trained mostly in the Soviet Union.

The Czechoslovak pilots first underwent conversion training to the de Havilland Canada DHC-1 Chipmunk trainers that were still used at Kweres. In the meantime, Syrian instructor pilots carried out a preliminary selection of student pilots for flying training, expelling 21 men from 46 candidates. The training of 11 cadets with very limited theoretical knowledge was led by Czechoslovak advisors from 11 May. According to their established practice, they proposed to dismiss seven of them as unsuitable for further training. Realising that such a high dismissal rate would not satisfy the Syrian customer, the Czechoslovak instructors worked hard to teach their students as much as possible. In the end, they trained nine student pilots to a state in which they were ready to undertake their first solo flights, which they successfully did some time later. The training was generally difficult because of the language barrier. While the Czechoslovak instructors were able to teach in the English language reasonably well, or at least sufficiently for the task at hand, the English proficiency of their Syrian students was almost non-existent.

Although the Czechoslovak instructors were highly respected by their students and resident Syrian instructor pilots, including the new commander of flying training school at Kweres, Course 627 was terminated prematurely. The Syrian Arab Air Force cancelled the contract officially on the grounds of supposedly inadequate knowledge of the English language on the part of the Czechoslovak instructors. Reportedly, the true reason was the return of two Syrian instructor pilots from training in Great Britain and lack of money. Some role was apparently also played by the new Commander-in-Chief of the Syrian Arab Air Force, General Louis Dakkar, and his different conception of flying training. While the Czechoslovak instructor pilots returned home on 1 July 1963, the interpreter Captain Nedvěd was transferred to a group of two Czechoslovak military doctors who were just commencing their Syrian activity under the code name Course 632.[20]

DESIGNING SYRIAN AIR BASES

Roughly one month after the official start of Course 627, another batch of Czechoslovak military advisors showed up in Syria. This time it was a group of military architects, airfield designers and experts on airfield support equipment from the Military Design Institute. Their activities received the cover designation Course 626 and were contracted as Supplement No. 1, Annex No. 1 of General Contract No. 20-12-212. The advisory team was led by Miroslav

Mužík (himself a military architect) and was composed of four specialists (František Martinec, Jan Tomáš, Jiří Knapp and Captain Jan Kašpar), a draughtsman (Josef Kuřátko) and interpreter/translator (Major Josef Arnstein). They arrived in Damascus on 28 April 1963 and were attached to the design bureau of the Syrian Arab Air Force. Because the duration of Course 626 was contracted for one year, the Czechoslovak advisors were accompanied by their wives and children from October and November. Initially, all lived in cramped conditions – 23 people in two five-room flats in Damascus that were previously used by Soviet advisors and their families. The situation improved slightly when Syria allocated one more four-room flat for them.[21]

The team was mostly tasked directly by General Louis Dakkar. The group finished building design documentation for an aircraft stand at Kweres Air Base and a preliminary project for completion of the Dmeir Air Base in early June. With regard to Dmeir, which was to be extended to provide room for three fighter squadrons, Miroslav Mužík visited General Dakkar to discuss the Czechoslovak proposal. The Commander-in-Chief of the Syrian Arab Air Force basically agreed with the suggestions and recommended the Czechoslovak designers personally visit the air base. On 9 June, Mužík, Knapp and Tomáš, accompanied by Captain Kasim, toured Dmeir and, to their great surprise, saw new Syrian MiG-21 fighters there.

This proved to be quite a complication because an airfield operating these jets required several special features, and the Czechoslovak experts did not have the required design documentation nor proper experience. However, the problem was solved and the necessary materials were sent from Czechoslovakia, while design proficiency was acquired using ‘on-the-job’ training. One of the characteristics of Dmeir at that time was its poor drainage. During heavy rainfall, water flowed from the surrounding hills and flooded the air base, including an underground command post that could be inundated up to a depth of 60cm (24in). The Czechoslovak group, assisted by Syrian construction designers, continued to work out building design documentation for the Dmeir air base so that it could accommodate one MiG-17 squadron and two MiG-21 squadrons.[22]

During December 1963, the Czechoslovaks prepared for Nayrab Air Base a preliminary project for three teaching rooms and a squadron building for a training unit equipped with soon-to-be-delivered L-29 Delfins. In the following month, they were tasked to prepare a project for a reserve airstrip at Bley, with a runway 2,500 metres long and 30 metres wide (8,202ft x 98ft), extensions for aircraft stands, a building for pilots and technicians, eight aircraft shelters and three arms depots for ammunition and bombs. Miroslav Mužík also prepared a proposal for a hangar at Dimas for 13 aircraft of a local aeroclub and the Syrian Ministry of Agriculture. Around the same time, Jiří Knapp was present at a preliminary final inspection of the T4 air base that was constructed with Bulgarian assistance.[23] The facility had a runway 3,000 metres (9,843ft) long, with a parallel taxiway that could be used as a reserve landing strip, two 42-metre-wide (138ft) hangars, a control tower with extension for emergency vehicles and a fuel depot. Following his visit, Knapp prepared a preliminary project for a reserve power-generating set-up for the airfield.[24]

The work of the Czechoslovak specialists continued with a project for eight aircraft shelters at the Cigale reserve airstrip. The team finished design documentation for the L-29 squadron building at Nayrab in February 1964. General Dakkar originally also wanted to place one hangar for repairs and a training hall at Nayrab. The hangar in question was an old French steel building that was to be dismantled and moved from Kweres.[25]

Miloslav Šmídt, test pilot of Aero Vodochody, who carried out post-assembly test flights of the first batch of L-29s delivered to Syria in 1964. Šmídt served in this function until 1977, when killed in a mishap during a delivery-flight of L-39ZOs to Iraq. (via Miroslav Irra)

In March 1964, Dakkar informed Mužík about his further intentions for Nayrab, that had recently undergone lengthening of the runway to 3,000 metres (9,843ft). He cancelled an idea of establishing an air academy in Kweres and instead embarked on a plan to build a new aviation training centre at Nayrab for the complete training of future pilots and basic training of aircraft technicians (both lasting only one year). Further training of technicians was to be carried out in foreign countries because, according to his own words, it was cheaper to train them abroad than to build a complete technical training school in Syria. In his latest intentions, Dakkar wanted to use the steel hangar from Kweres for a training squadron equipped with L-29 Delfins. During the same month, the Czechoslovak team visited Hama airfield in order to prepare a general layout for its future planned role as a home base for two fighter squadrons. At this time, Hama was not used operationally. It had only three hangars: the first served as a central air force depot, wooden decoys of MiG-15s were stored in the second, and the third was used as a garage for vehicles. Moreover, its runway had received no maintenance during the previous six years.[26]

The work of the Czechoslovak specialists ranged from design studies up to construction drawings of buildings. They designed objects and facilities for the urgent completion or reconstruction of several air bases, airstrips and radar posts of the Syrian Arab Air Force. Moreover, until their departure on 28 April 1964, they participated in the selection of an area for construction of Latakia airport for the Syrian Civil Aviation Authority and prepared general layouts for completion of air bases at Mezze, Nayrab and Hama. General Dakkar had only words of praise for the work they carried out.[27]

COURSES IN AVIATION MEDICINE

Two Czechoslovak military doctors, Major Vladimír Horáček and Lieutenant Colonel František Havlín – both experts in aviation medicine – arrived in Syria on 3 July 1963 within the frame of Course 632. This course was contracted on 13 June that year as

Supplement No. 2 of General Contract No. 20-12-212 with the aim to provide medical expertise to the Syrian Arab Air Force medical personnel and assistance in the establishment of a medical care system within the Syrian Arab Air Force, including preparation of medical regulation.[28] Both Czechoslovak doctors were attached to the Aviation Medical Centre. The Syrian Arab Air Force leadership was primarily interested in updating its old regulations with Czechoslovak experience in medical selection and assessment of aircrews for service on the latest generation of high-performance combat aircraft – Syria had recently obtained MiG-21 fighters and several of its pilots had already undergone conversion training in the USSR. A second immediate requirement was the examination of several Syrian flyers with health problems.[29]

The Czechoslovak military doctors could clearly see that the current Syrian Aviation Medical Centre was inadequate for its task. Its primitive medical equipment and hygiene standards had gross defects. Moreover, it had no permanent medium-level medical staff and only one Syrian doctor was present. The situation was further complicated due to strained relations between the Aviation Medical Centre and other military medical facilities of the Syrian Arab Armed Forces. The Czechoslovak doctors prepared drafts of three aviation medical regulations for the Syrian Arab Air Force during their stay in Damascus. Despite their constant proposals for improvement of conditions at the Aviation Medical Centre, their efforts were met only by passivity and lack of interest by the Syrian staff. In addition to their main task, Horáček and Havlín assisted with the medical treatment of personnel from the Czechoslovak diplomatic mission in the Syrian capital. Both doctors and their interpreter, Captain Jaroslav Nedvěd, returned home in January 1964. The Commander-in-Chief of the Syrian Arab Air Force, General Dakkar, and chief of the Aviation Medical Centre, General Zawdat Adi, evaluated their work very positively.[30]

While Czechoslovak medical personnel provided expertise in Syria, their Syrian counterparts were dispatched to Czechoslovakia following the signing of Supplement No. 3 of General Contract No. 20-13-212.[31] Three doctors (Mohamed Ziad Abou Ghazaleh, Jahia el Noss and Mohamed Walid Jamran) serving with the Syrian Arab Air Force arrived in Czechoslovakia on 19 September 1963 for an educational stay at the Institute of Aviation Medicine (*Ústav leteckého zdravotnictví*) in Prague, under the Czechoslovak cover name Course 237. Their actual study started five days later, with the intention of increasing their speciality skills in several disciplines of aviation medicine. Among other things, they learned methods for the selection of aircrews from a medical point of view, including their periodic medical check-ups.[32] Despite the terms of the contract, the expertise of the Syrians regarding practice in aviation medicine was not sufficient in order to complete their studies within the given period of 10 months. The Syrian doctors were well aware of this deficiency, and in April 1964 asked their superiors to extend the course. However, this request was turned down and Course 237 was duly finished according to the original plan on 31 July.[33]

DELFIN DEAL

In the late 1950s and early 1960s, military assistance for Damascus was provided principally by the Soviet Union[34] and Czechoslovakia, and on a smaller scale also by Poland and Bulgaria. The scope of Czechoslovak involvement in Syrian military matters was widened with the delivery of new jet training aircraft. Poland tried to offer PZL TS-11 Iskra jet trainers. However, the Syrian Arab Air Force was not satisfied with the delivery date and performance of the aircraft. Although the price of a Polish airplane was substantially less, it was decided to buy a more expensive Czechoslovak Aero L-29 Delfin.[35]

The leadership of the Syrian Arab Air Force first expressed its intention to obtain L-29 Delfin training aircraft during negotiations with the Czechoslovak military delegation in Damascus in August and September 1962. Several meetings then followed, and on 10 September 1963, the Presidium ÚV KSČ (*Předsednictvo ÚV KSČ*) approved the delivery of various military materiel up to the value of 120 million CSK. The Syrian Arab Republic was to pay for the Czechoslovak deliveries in annual instalments between 1964 and 1970, again with each one comprising 25 percent in British pounds with the rest in Syrian goods, at a 2 percent interest rate. Several consecutive negotiations between the Syrian Ministry of Defence and Czechoslovak Ministry of Foreign Trade were held in September and October 1963. The whole matter culminated on 1 November 1963 in Prague, where an agreement for delivery of military materiel worth 65,520,000 CSK, and a supplement of the agreement from 21 July 1962 valued at 34,272,000 CSK, were signed. Details of each of the deals are listed in Tables 6 and 7.[36]

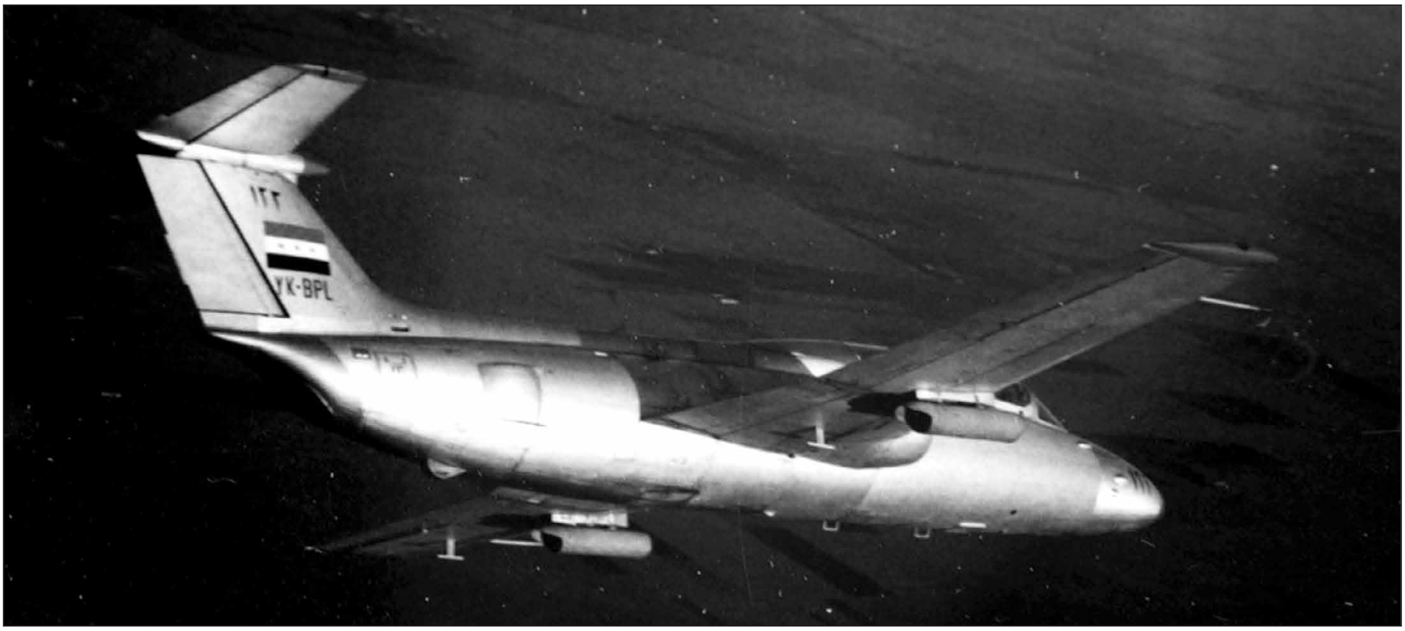
Table 6: Agreement for the delivery of L-29 Delfin training aircraft and spare parts from 1 November 1963 (Contract Nos 11-4-3, 12-4-101, 13-4-13 and 21-4-4)[37]

List of deliveries	Number of examples	Value
L-29 Delfin	20	£950,000
M-701 spare engines	12	£400,000
Spare parts for L-29 aircraft	-	
Spare parts for MiG-15UTI aircraft	-	£200,000
Spare parts for T-34/85 tanks	-	£1,200,000
Reserve for artillery spare parts	-	£500,000
Total value		£3,250,000

Table 7: Supplement No. 1 of Agreement from 21 July 1962 (Contract Nos 20-25-33 to 20-35-33)[38]

List of deliveries	Value
Non-technology equipment for repair plants (Operation 7413, Operation 7415, Operation 7418, Operation 7419)	£1,700,000
Training centre for the teaching of workers in armament repair plant (Operation 7415)	
Training centre for the teaching of workers in communication equipment repair plant (Operation 7418)	
Further equipment for repair plants	

The agreements from 21 July 1962 (including the supplement) and 1 November 1963 were for a total value of 143 million CSK (76 million and 67 million CSK respectively), with the last instalment to be paid on 1 October 1970. Within the frame of both agreements, several contracts for specific deliveries were to be signed. However, until 30 November 1966, the Syrians only managed to sign contracts worth 115.1 million CSK. This was for the most part due to Syria's financial difficulties. In 1965, Syria asked for a postponement of instalments for the agreement from 21 July 1962, with money



An L-29 manufactured for Syria – and already wearing the Syrian fin flash, and serial 123 (together with the transfer registration 'YK-BPL') – as seen during flight-testing in Czechoslovakia, prior to delivery. (Albert Grandolini Collection)

payable during 1965 and 1966 rescheduled to the period from 1968–70. Czechoslovak officials accepted the request, but the economic problems of Damascus only mounted. Consequently, a Syrian government delegation that stayed in Czechoslovakia between 24 and 28 November 1966 had to ask for further concessions (to forgive the 2 percent interest rate, postpone payments until 1971–75 or offer better terms of payment within the general contracts for military training). However, Czechoslovak representatives immediately turned down all Syrian requests. In order to comply at least partially with Syrian wishes, Prague terminated the agreements from 21 July 1962 (including the supplement) and 1 November 1963 and merged them together. Their total value was now £5.75 million (approximately 115 million CSK), of which the Syrian Arab Republic had already paid £3.3 million (some 66 million CSK). The remaining amount of £2.45 million (some 49 million CSK) was to be paid from 1967–70.[39]

The full scope of these difficulties was still quite distant in 1963, and on 13 December of that year, the Syrian military attaché in Czechoslovakia, Lieutenant Colonel Dardar, signed Supplement No. 3 of General Contract No. 20-12-212 for the training of Syrian instructor pilots and technicians on L-29 Delfin aircraft at Nayrab (Czechoslovak cover name Course 644).[40] Further deals for military assistance followed in short order – Supplement No. 4 of General Contract No. 20-13-212 was concluded in Damascus on 21 December 1963 (for academic studies of Syrian students at the VAAZ, Course 246), while Supplement No. 5 of the same general contract was signed in Damascus on 19 January 1964 (for training of Syrian student pilots on L-29s in Czechoslovakia, Course 247).[41]

It appears that in March 1964, General Dakkar issued a request for tactical training of Syrian Arab Air Force staff officers and squadron and air brigade commanders. Two courses were proposed, their purpose being to teach combat deployment of individual air force components, organisation and planning of cooperation with ground forces; organisation and execution of combat support for aviation units; and planning, organisation and control of flying training or tactical principles of navigation, bombing, air gunnery and air photography. Based on these requirements, Supplement No. 4 of General Contract No. 20-12-212 was prepared, but was never signed in this form.[42]

LEARNING TO FLY THE L-29

Between 5 and 27 January 1964, a group of Czechoslovak officials from the Ministry of National Defence and Ministry of Foreign Trade visited Syria and held meetings with their counterparts in Damascus. Czechoslovak representatives discussed the bid for training courses of Syrian Arab Air Force officers that was made by General Dakkar during his visit to Prague in October 1963. Some training courses were rejected, while the others were postponed because of the unfavourable Syrian financial situation. In the process, both sides signed Supplement 5 of General Contract No. 20-13-212 for the training of 20–25 Syrian pilots on L-29 Delfins over 27 months, with an option for their follow-on training on MiG-15 and MiG-21 fighters. Prices for training on L-29s were as follows:

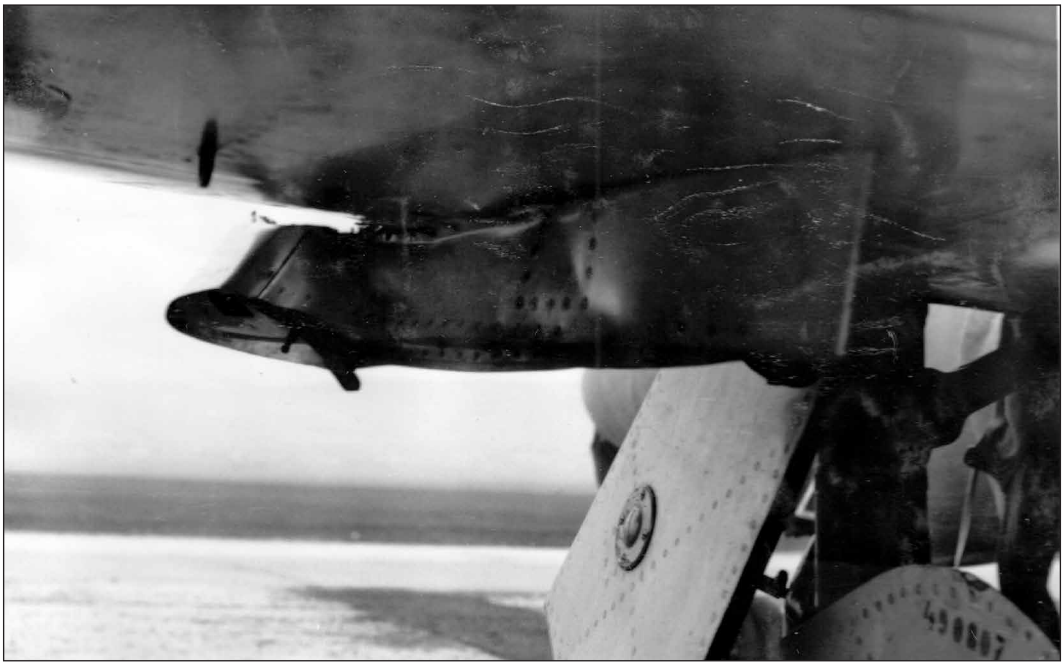
- one month of theoretical instruction and accommodation per student: £70
- one month of catering per student: £15
- one flying hour on an L-29: £75

If the option was exercised, the HTS would charge Syria £105 for each flight hour on a MiG-15 or MiG-15UTI, and £420 per flying hour on the MiG-21 (in the end, the option was not exercised).

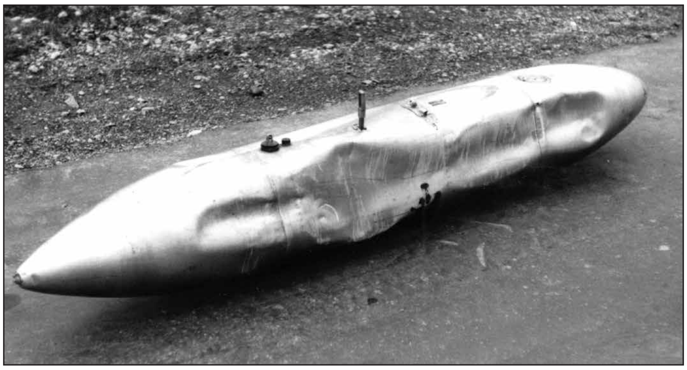
The Czechoslovak Air Force established Course 247 to train Syrian pilots on the L-29 so they would master its combat deployment in a flight formation (four aircraft) in daytime visual flight rules (VFR) conditions, in a pair in daytime instrument flight rules (IFR) conditions and in solo formation in night-time VFR conditions. After graduating from this course, the Syrian pilots were to be prepared for conversion training on more advanced types of fighter or fighter-bomber aircraft.[43]

Course 247 began for the Syrian student pilots at the air academy at Nayrab, where they underwent a selection process on Chipmunks and took English language lessons. Syrian instructor pilots eventually selected 19 candidates for training in Czechoslovakia. The Syrian group, under the leadership of Major Chattra, arrived in Czechoslovakia on 5 March 1964. The student pilots underwent a medical examination at the Institute of Aviation Medicine in Prague. Cadet Mohammad Dieb was dismissed due to medical reasons after the check-up and returned to Syria on 4 April. Course

The site where Captain Slezák's L-29 crashed, on 3 March 1966. (VÚA-VHA Praha)



Damage on the pylon of the L-29 flown by Zeyab Hariri. (VÚA-VHA Praha)



Jettisoned drop tank from Hariri's jet, showing traces of collision. (VÚA-VHA Praha)

247 commenced on 13 March at Přerov air base and was conducted by the resident 4th Aviation Training Regiment (*4. letecký školní pluk*). Actual flying started on 13 May. At the beginning of the course, the Syrian student pilots struggled because of their poor knowledge of English, the Latin alphabet and technical theory. Their discipline was initially only average; after several infringements of Czechoslovak disciplinary rules, Major Chattra requested the establishment of a prison cell for the Syrian cadets inside the air base. The facility was promptly set up, and the cell had a positive preventive impact on the Syrians, so was used only rarely. Nevertheless, the Syrian cadets lived quite a 'social' life – two of them became infected with gonorrhoea, while one female Czechoslovak medicine student in Olomouc had to have an abortion after a relationship with one of the Syrians.[44]

On 22 May 1965, Major Chattra returned to Syria with his family. He was replaced by Lieutenant Colonel Soubhi Haddad, who had arrived in Czechoslovakia on 30 April. Unlike the student pilots, both Syrian commanders lived with their families in apartments outside the air base. The first Syrians began their solo flights in early June 1965. Aviation training continued in Přerov until 15 September, when the 4th Aviation Training Regiment redeployed to Sliač air base. The Syrian training continued at Sliač from 1 October and finished on 30 March 1966.

Between 3 and 15 January 1965, the Syrian cadets were sent on holiday to a mountain recreation house named Matliare in the High Tatras. Four cadets were allowed to spend this time at home in Syria. One of the main requirements of the Syrian Arab Air Force leadership regarding Course 247 was a high intensity of training in the shortest possible time. Czechoslovak Air Force officers warned General Dakkar before the start of the course that such an arrangement was virtually impossible from a methodical and technical point of view. On 16 March 1965, despite such warnings, General Dakkar requested a reduction of the training timeframe by another two months, while preserving the whole syllabus. Although the weather in the second half of 1965 and the first part of 1966 was exceptionally poor, instructors of the 4th Aviation Training Regiment managed to almost complete the contracted training syllabus, but in a shortened timeframe. This could be done only thanks to the hard work of Czechoslovak Air Force technicians and factory

Table 8: Training activity within Course 247

	Number of flights			Number of flying hours			Number of exercises		
	planned	Accomplished	%	planned	accomplished	%	planned	accomplished	%
With instructor	3,144	4,591	147	1,426.30	1,801.16	125	1,422	1,308	93
Solo	3,546	3,393	95	1,813.30	1,517.08	87	1,332	1,332	115
Total	6,690	7,984	119	3,240.00	3,318.24	102	2,754	2,640	103

maintenance personnel, although they were motivated by special financial bonuses.

At that time, L-29s were still at the beginning of their service career, with the usual teething problems, but the high intensity of their service in the 4th Aviation Training Regiment during Course 247 caused an increased failure rate.[45]

During the course, the Syrian student pilots were involved in three accidents with L-29s. The most serious of these took place on 3 March 1966, during a training attack by two Delfins flown by Syrian pilots against a flight of other L-29s flying at 1,200 metres (3,937ft). A wingman from the attacking formation, Zeyab Hariri, flew into the exhaust plumes of the aircraft in front of him and hit the leading Delfin (s/n 1325) piloted by instructor Captain Radoslav Slezák with the port external fuel tank of his aircraft. Cadet Hariri immediately jettisoned both external tanks from his Delfin (s/n 0807) and returned to Sliač. Captain Slezák's L-29 went into an unrecoverable spin, but he successfully ejected in an inverted position at an altitude of 1,000 metres (3,281ft). The aircraft crashed near the village of Dolná Mičiná and was completely destroyed. An investigation blamed the crash on Slezák's violation of the training syllabus and his overestimation of Hariri's capabilities.[46]

A graduation ceremony took place on 2 April 1966 at Sliač air base. Among the prominent Syrians present were Sabet Aris (ambassador in Czechoslovakia), Colonel Barakat (military attaché in Czechoslovakia), Major Kaka (deputy military attaché in Czechoslovakia) and General Dardari (Chief of the Training Department, General Staff of the Syrian Arab Armed Forces). The cadets received Syrian Arab Air Force pilot badges and were promoted to the rank of lieutenant. Lieutenant Colonel Haddad left Czechoslovakia with his family on 5 April 1966. Eight of the Syrian fledgling eagles returned to their homeland on 7 April, and the remaining 10 on 9 April. Despite numerous problems, Course 247 was classified by the Czechoslovak Air Force leadership as one of the best foreign training courses that had been carried out to date by the Higher Aviation Training School (*Vyšší letecké učiliště*), superior command of the 4th Aviation Training Regiment.[47]

CZECHOSLOVAK AIR FORCE ADVISORS IN SYRIA

While Syrian student pilots learned to fly L-29s in Czechoslovakia, a Czechoslovak advisory group was sent to Syria to provide training on newly delivered Delfins in the Air Force Academy at Nayrab. The mission received the Czechoslovak cover name Course 644. The advisory team was led by Colonel František Kaválek, and its first part – consisting of Colonel Kaválek, Major Kučera, Lieutenant Colonel Kačena, Captain Hastík, Captain Řezanina and Captain Nedvěd – left Prague on 27 May 1964 on board a passenger airplane, arriving in Damascus at 2:30 p.m. the same day.

On the next day, the advisors were introduced to the Syrian Arab Air Force commander, General Dakkar, and informed him about their mission and the state of the training of Syrian pilots on L-29s in Czechoslovakia. The Czechoslovak advisors spent 29 and 30 May at the Syrian Arab Air Force headquarters, where Kaválek discussed the training syllabus with Lieutenant Colonel Jerroudi, Chief of the Training Department. Major Kučera, with Captain Řezanina and Captain Hastík, met the Syrian Arab Air Force chief technical officer, Colonel Nouri, and talked through the training programmes for aircraft technicians and armourers. Several changes to the originally planned syllabus were approved. Meanwhile, Lieutenant Colonel Kačena and Captain Nedvěd expanded the training for the Syrian electric and communication equipment technicians.[48]

After a day off on 31 May, the advisory group was flown from Damascus to Nayrab, where they were warmly welcomed by the commander of local technical training courses, Captain Waleed Shaban, a graduate of a university in Texas, and the chief technical officer of Nayrab Air Base. Members of the advisory group stayed at the Ramses Hotel in three rooms (where a bath and toilet were shared by six rooms). However, the accommodation did not fulfil the parameters of the contract and was not appropriate for long-term stay, so the Syrians had to find a replacement furnished apartment.

Although the Czechoslovak advisors received the best offices available at the Air Force Academy, their equipment was very modest at best. All rooms in the academy were empty at the time of their arrival, but this soon changed, with classrooms starting to be furnished with the necessary equipment. However, there was still no electric in the buildings and the water piping was leaky.

Actual training began on 6 June with the course for airframe and engine technicians. Some trainees were absent during the first week because they first had to graduate from secondary school, but they promised to catch up with the rest of the group. Despite some doubts by the Czechoslovak instructors, they did exactly what they promised. As none of the Syrian students understood English, a senior Syrian officer acted as an interpreter during all lessons, which meant translating for six hours a day. The course for electrical and instrument technicians began on 27 June.

During that month, factory technicians began to assemble dismantled Delfins at Nayrab Air Base. Factory pilot Miloslav Šmídt

Table 9: Courses and number of students in June 1964, Course 644[50]

Course	Total number of students	Officers	Warrant officers	Sergeants
airframe and engine	26	4	2	20
electrical and instrument systems	16	1	2	13
communication systems	7	2	1	4
armament	6	-	2	4
pilots – instructors	10	10	-	-

then test-flew all assembled aircraft. The training of technicians was negatively influenced by noise from the intensive training of Chipmunks, the aircraft stand of which was situated just 50 metres (164ft) or so from the classrooms. At that time, Nayrab Air Base had no ground support equipment for night-time operations. Upon Czechoslovak instructions, the Syrians established two lines of kerosene lamps along the 2,500-metre-long (8,202ft) runway.[49]

In the meantime, representatives of Aero Vodochody experienced major difficulties during the handover of the L-29s. The Syrian acceptance pilot was Lieutenant Colonel Adnan Djabban, commander of the resident training squadron. He had some experience on Meteors, Vampires and Hunters, but had not flown jet aircraft for the last six years. His little practical experience meant that he complained about some “insufficient” flying characteristics of the Czechoslovak jet. The head of the factory group, Havelka, and Major Kučera had to explain to him that everything was alright with the aircraft. All L-29 Delfins (Syrian s/n 101–110) were assembled by factory technicians during May (six aircraft) and June 1964 (four aircraft).[51]

The second group of Czechoslovak advisors, which arrived in Damascus on 1 July 1964, comprised of eight members: Lieutenant Colonel Susa, Major Ďurovec, Major Novosad, Major Arnstein, Captain Krajčovič, Captain Matušovič, Captain Bubla and Warrant Officer Špica. The team appeared at Aleppo on 3 July and started the teaching of Syrian students the following day. In the meantime, Syrian technicians started to participate in maintenance of the Delfins and engine tests. While Czechoslovak advisors taught sometimes for up to six hours a day, some interpreters translated for as long as 10 hours a day. Training course commander Captain Shaban judged the knowledge that Syrian personnel received during the Czechoslovak training as outstanding.[52]

The Syrians took over the Delfin trainers only with great reluctance. However, this would not be the end of the problems for the Czechoslovak instructors and company representatives. At that time, the L-29 was still a very new aircraft, with some potentially dangerous deficiencies discovered only during its early service in the Czechoslovak Air Force. Not too long after the complete assembly of the Syrian Delfins, Czechoslovak technicians had to install revised elevators, main landing gear struts and fire-extinguishing pipes. This not only caused problems in the planning of flight training but also damaged Czechoslovak reputations.

Table 10: Czechoslovak instructors of Course 644[53]

Rank and name	Position	Arrival in Syria	Departure from Syria
Colonel František Kaválek	commander of the advisory group	27 May 1964	28 January 1965
Major Josef Kučera	deputy commander, chief technician of the advisory group, teacher – aerodynamics	27 May 1964	28 January 1965
Captain Vladimír Řezanina	teacher – airframe	27 May 1964	27 August 1964
Captain Jaroslav Hastík	teacher – engines	27 May 1964	27 August 1964
Lieutenant Colonel Miloslav Kačena	teacher – electrical and instrument systems	27 May 1964	27 August 1964
Captain Jaroslav Nedvěd	interpreter	27 May 1964	27 August 1964
Major Bonaventur Ďurovec	instructor – operational service of L-29s	1 July 1964	28 January 1965
Captain Josef Bubla	teacher and instructor – armament	1 July 1964	5 November 1964
Captain Michal Krajčovič	instructor – communication equipment	1 July 1964	6 August 1964
Major Alois Novosad	instructor – communication equipment	1 July 1964	5 November 1964
Warrant Officer Svatopluk Špica	instructor – electrical and instrument systems	1 July 1964	28 January 1965
Major Josef Arnstein	interpreter	1 July 1964	6 August 1964
Lieutenant Colonel Josef Susa	interpreter	1 July 1964	3 December 1964
Captain Rudolf Matušovič	interpreter	1 July 1964	27 August 1964
Captain Milan Seman	instructor – operational service of L-29s	3 October 1964	28 January 1965
Captain František Uhlíř	instructor pilot	3 October 1964	7 January 1965
Major Ladislav Chaloupský	instructor pilot	3 October 1964	7 January 1965

Furthermore, loose bolts were found under the floor of the cockpit in one aircraft (in the area of the push-pull rod, where they could get stuck and cause a crash). The situation did not develop into a major embarrassment thanks to the prompt response of Major Kučera – the bolts were fortunately found simultaneously by Czechoslovak and Syrian technicians. The same situation was repeated in a second Delfin, where a scandal did not take place only because Czechoslovak technicians were able to check this part of the aircraft before the Syrians could do so. Before this incident, acceptance pilot Lieutenant Colonel Djabban had pointed out to the factory representatives that something rattled inside the airplanes. Both Havelka and Šmídt tried to convince him that the noise was caused by the blades inside the engine![54]

However, these complications caused much embarrassment back in Czechoslovakia. Major Kučera, deciding to ignore the administrative chain of command and acting on his own initiative, made use of his contacts at the highest levels of the Czechoslovak communist leadership and sent a letter of complaint about the poor quality of work by the aircraft manufacturer directly to the Department of International Politics ÚV KSČ (*Oddělení mezinárodní politiky ÚV KSČ*). Several officials then apparently experienced great difficulty trying to explain these deficiencies.[55]

DELFINS AT NAYRAB

In July 1964, the Czechoslovak instructor group finished the theoretical part of all maintenance courses, while the practical training of Syrian technicians was completed in September. On 26 September, preparation of the L-29s was started for flying training.

During September, the number of malfunctions on the Delfins started to increase. They were caused mostly by Syrians ignoring the guidance of Czechoslovak advisors and by the negligence of Syrian maintenance personnel. Although Czechoslovak officers had suggested several improvements in maintenance organisation at the beginning of August, these efforts bore no fruits. Consequently, six of the 10 L-29s were not in airworthy condition on 20 September. In several cases, the Syrian authorities were not able to find out who created these malfunctions, nor where or when. This situation led to suspicion that maintenance work was done after official working hours without the supervision of Czechoslovak advisors. The Syrian Arab Air Force commander, General Dakkar, was informed about the situation by Colonel Kaválek. The head of the Czechoslovak advisory group eventually decided to personally seal the respective sections of the aircraft, and checked them periodically at the beginning of each working day. At the same time, rumours about the supposed advantages of British Jet Provost over Delfin began to spread among the Syrian officers at Nayrab.

Members of the Czechoslovak advisory group were under regular surveillance by the Syrian security apparatus. This was made in such a rough style that Kaválek (prompted by the Czechoslovak ambassador in Syria) complained to General Dakkar. The general situation at Nayrab was not helped by the fact that for contact or discussion with Czechoslovak officers outside working hours, Syrian soldiers at the base needed to obtain special permission. Without this permission, contact with the Czechoslovak advisors in their free time was strictly prohibited.[56]

The training of instructor pilots was to begin on 1 August 1964, but had to be postponed. Flying activity did not start until more than two months later, on 12 October. The main reason for this delay was that the Syrian Arab Air Force needed to train an additional 36 cadets on Chipmunks before their departure to the Soviet Union for follow-on training. Despite Czechoslovak attempts, maintenance of the Delfins was little changed, so further malfunctions (due mainly to unprofessional handling by Syrian technicians) on the aircraft appeared during October. The Nayrab Air Base commander, Colonel Fouad Kallas, indicated to Colonel Kaválek that he could assure problem-free maintenance of the L-29s, but only if the head of the Czechoslovak training team provided him with a list of Syrian technicians unable to serve on Czechoslovak aircraft. Kallas would then add several other names of Syrian soldiers who were able to provide good maintenance but were unsuitable for 'other' (i.e. political) reasons. Kaválek, unwilling to take part in such intrigues within the Syrian Arab Air Force, flatly refused and promptly informed the Czechoslovak embassy in Damascus.[57]

Training of future Syrian instructor pilots on Delfins began on 10 October 1964 with the cockpit drills, with actual flying following two days later. The start of flight training was complicated by the higher failure rate of L-29s, caused by their relatively long inactivity. The Delfins had been assembled and test flown during May and June, but since then they were waiting on the ground for the flight training, that only took place several months later (Czechoslovak pilots carried out test flights of L-29s before commencing the pilot training between 6 and 10 October). During October, the pilot training went well thanks to the quality of the Syrian pilots and the intensive work of Czechoslovak military advisors and factory technicians. Throughout the month, the Syrians carried out 210 flights: 109 with an instructor and 101 solo. On average, each flying day included three-and-a-half hours of flying activity with 16 missions, during which pilots accumulated around 10 flight hours. Nevertheless, previous Czechoslovak experience at Nayrab indicated that after the departure of the Czechoslovak Air Force advisors and factory technicians, the Syrian Arab Air Force would have serious problems maintaining the operational service of the Delfins because of the low standards of Syrian maintenance personnel.[58]

In November, the pilot training was hampered by winter weather, with strong winds, rain and low temperatures around 0°C (32°F). During 16 flying days in November, Syrian instructor pilots flew 98.5 hours. On 17 November, Syrian pilot made an error after landing that caused light damage to Delfin '105', with both main landing gear tyres bursting and one wheel disc cracked. The airplane was promptly repaired and was ready to fly again by 19 November.

During November, Delfins '104', '105' and '108' underwent periodic maintenance after 25 flight hours. In the process, Czechoslovak instructors found that the English edition of the 'Periodic Inspections' manual had serious technical and language

A group of Syrian student pilots in front of the L-29 serial number 125, at Nayrab AB. (Albert Grandolini Collection) shortcomings. In contrast to other manuals for service and maintenance of Syrian L-29s, this volume did not go through proof-reading by Czechoslovak Air Force specialists. Some parts of the manual for the Syrian Arab Air Force were even completely missing. Thus, Czechoslovak instructors and factory representatives at Nayrab had to correct mistakes that were caused by the poor work of the original translator. This activity continued until December.[59]

Periodic inspections after 25 flight hours continued in December on aircraft '101', '102', '106', '107', '109' and '110'. Delfin '110' had to go through a defectoscopy of turbine blades and inspection of the combustion chamber because, on 3 December, a Syrian technician started up the Delfin with the port engine inlet covered. Czechoslovak advisors had to notify the chief technical officer at Nayrab that Syrian armament technicians did not carry out periodic inspections after 25 flight hours in accordance with the manuals. Furthermore, some activities, such as work on the ejection mechanism, were not performed at all. After the intervention of Captain Shaban, the situation improved, but only slightly. Post-flight inspections of L-29s were also of a low standard. Syrian technicians had a tendency to make their job simpler, ignoring instructions in technical manuals. The supervision of their officers was irregular and only superficial. One of the reasons was the low educational qualifications of the technicians – most of them had just five or six years of elementary schooling.[60]

The Syrian Arab Air Force was finally able to provide proper equipment for illumination of Nayrab Air Base, so night-time training of Syrian pilots could commence on 12 December. Until 28 December, they accumulated 41.5 hours of night flying – 75 percent of the total training plan. Flight training was hampered by very poor weather in the second half of December. As of 26 December, the 10 Syrian L-29s accumulated a total of 290 flying hours. On 27 December, a periodic inspection after 50 flight hours was started on Delfin '108'.[61]

The training of Syrian pilots by Czechoslovak personnel came to an end in December 1964, with both Czechoslovak instructor pilots departing Syria on 7 January 1965. In the same month, periodic maintenance after 50 flight hours was finished on L-29s '104', '105' and '108'. In accordance with a request by the Syrian Arab Air Force chief technical officer, Colonel Nouri, Syrian technicians were familiarised with periodic maintenance after 100 flight hours on aircraft '104' and '105' – two Delfins with the highest amount of flying time. Among other maintenance tasks, Czechoslovak instructors demonstrated installation and dismantling of the M-701 engine to and from the aircraft's fuselage. In January, Syrians carried out three limited flying days on their own. On this occasion, all organisation of flying operations and maintenance of the L-29s were performed by Syrian Arab Air Force personnel.[62]

LESSONS LEARNED

The Czechoslovak instructors fulfilled the terms of the contract with regard to conditions at Nayrab Air Base – the Syrian Arab Air Force was unable to supply adequate testing and measure instruments, so training of some technicians could not be carried out completely. They had successfully established operational service and maintenance of L-29 Delfins in the Syrian Arab Air Force. Maintenance personnel were trained to such a standard that regular service of Syrian L-29s could be ensured without the presence of Czechoslovak instructors and advisors. Course 644 took place between 27 May 1964 and 28 January 1965, during which 17 Czechoslovak instructors trained 58 maintenance personnel and nine instructor pilots. Syrian pilots mastered normal and instructor flying during both day and night in VFR conditions.[63]

The actual flight training had to be postponed by two months because of the low number of Syrian instructor pilots. During a month originally intended for theoretical training of future Syrian L-29 instructor pilots, they had to train cadets on Chipmunks before sending them for further training in the Soviet Union. In the end, theoretical training of L-29 pilots took two months in the form of 'evening school'. Thus, during a standard working day, Syrian pilots trained their cadets on Chipmunks and in the afternoon and evening took part in lessons provided by the Czechoslovak Air Force instructors. This state of affairs was exhausting not only for the Syrian pilots but for their Czechoslovak counterparts as well. The training of Syrian pilots at Nayrab was delayed for an additional 14 days because the Syrian Arab Air Force could not supply equipment for night-time operations at the required time. Training in night flying was accomplished only thanks to sheer luck – as it took place in December during foul weather – and the immense efforts of the Czechoslovak instructors.[64]

The initial reception of the L-29 Delfins into the inventory of the Syrian Arab Air Force was not a very warm one. At the start of theoretical courses for Syrian technicians, the Czechoslovak Air Force instructors met only with an aversion towards new aircraft by the Syrian officers, even before the airplanes were handed over. According to the Czechoslovak instructors, there were reasons for such distrust and aversion. Before acceptance of the L-29s, Nayrab Air Base was equipped only with rudimentary Chipmunk training aircraft that needed little attention from Syrian pilots and technicians.

According to Colonel Kaválek, "[Nayrab] air base lived the idyllic life of our interwar period [1918–38] aeroclub. The L-29 aircraft, in many ways more complex and demanding than the MiG-15, meant the ultimate end of this comfortable life." Instructor pilots at Nayrab Air Base were trained not only in the Soviet Union, but also in the United Kingdom. Some of them had practical experience with British Jet Provost training aircraft. Most of the officers were pro-Western orientated and admired Western technology, while at the same time underestimating (sometimes justifiably) the capabilities of Eastern Bloc technology. Moreover, the Delfins were bought by General Dakkar, who was hated by the whole officer corps of the Syrian Arab Air Force; not only was he a Christian, but his behaviour towards subordinates was arrogant and insulting. During discussions with Czechoslovak instructors, Syrian officers at Nayrab spoke about Dakkar only as "this damned dog Dakkar".[65]

After intensive work by the Czechoslovak Air Force instructors, Syrian opinion of the L-29 was completely reversed, with Syrian Arab Air Force technicians and pilots having complete confidence in the Czechoslovak jet trainer. From discussions with Syrian Arab Air Force officers at Nayrab, Kaválek gained the following opinion on their political attitude: "They are pathologically proud of their Arab history. They hate Israel and Jews, and the SS-men are their idols because they murdered Jews en masse." From his discussions with Syrian officers, it transpired that they hated communism and that Syria searched for help in communist countries only "because the USA and the United Kingdom are supporting Israel".[66]

In general, Czechoslovak instructors were quite confused about the qualities of Syrian Arab Air Force personnel. Syrian sergeants and warrant officers had a low education, while officers were quite sophisticated with a high level of technical knowledge. Another surprise came in terms of the knowledge of foreign languages, with Syrian technical officers possessing a better knowledge of Russian

A flight of three L-29s of the SyAAF (including serials 172, in foreground, and 109, background) seen in the 1970s. The type played a crucial role not only in training dozens of new Syrian pilots when the re-established air force needed them most urgently, in the mid-1960s, but also in the training of two dozen subsequent generations of Syrian pilots. (Martin Smisek Collection)

than their counterparts in the Czechoslovak Air Force, who in some cases were able to speak only Czech or Slovak.

Course 644 also taught several unpleasant lessons for Czechoslovak officials. Technical documentation for the L-29 was printed on low-quality paper. The text contained incorrect translations, with poor use of terminology. Some parts of the manuals were even completely missing. The L-29 aircraft pictured on photographs in the manuals had Soviet Air Force insignia, and thus many Syrians doubted whether the Delfin was really a Czechoslovak aircraft. The Czechoslovak Air Force instructors experienced great difficulties with teaching some courses for Syrian technicians. Because of inadequate scheduling, the planned time for teaching was insufficient – the number of training lessons was fixed by the contract and could not be changed. Moreover, the syllabuses were sufficient only for students who already had a theoretical and practical knowledge of MiG jet fighters, which was not generally the case with Syrian pilots.

Although the first batch of Delfins for the Syrian Arab Air Force comprised only 10 aircraft, their instruction and information plates were produced in three different languages (Czech, Russian and English). Course 644 was performed only in English, a situation that sometimes caused major problems during training. Poor quality management in the production factory also meant that delivered L-29s suffered from large-scale malfunctions of some systems. Despite regular warnings, officials in the production factory and the HTS ignored these reports, claiming that the Czechoslovak Air Force instructors only exaggerated the problems. In fact, the opposite was true: in order not to damage Czechoslovakia's reputation, the instructors had to covertly repair some defects, while other malfunctions were disguised until factory technicians could fix them. This futile effort caused Major Kučera to send a complaint directly to the ÚV KSČ.[67]

FURTHER STUDIES IN CZECHOSLOVAKIA

While Course 231 for 40 Syrians was still underway in Brno, training of a further 11 Syrians started in Přerov at the Tactical-Technical Courses (*Takticko-technické kurzy*) section of the Higher Aviation Training School on 23 January 1964, under the code name Course 246. Its aim was to provide preparatory training for Syrian students for their further academic study of signal communication at the VAAZ. Most of the time was dedicated to teaching the Czech language, including required terminology, with the rest spent on mathematics, physics, descriptive geometry, technical drawing and physical training. One of the participants, Hassan Al Hamid, came close to being fired from the training because of his constant and serious infringement of military discipline. Another Syrian, Abdel Razzak Dandal, was not so fortunate and was dismissed on the grounds of his poor discipline and work attitude on 28 August. The preparatory training was finished on 12 September, with the successful graduation of the remaining 10 participants. Course 246 continued for a further four-and-a-half years, with regular academic studies at the Foreign Faculty of the Antonín Zápotocký Military Academy. Because of poor learning outcomes, three of the students – Ziade Oussama, Zaki Georges and Hassan Al Hamid – were recalled home by the Syrian authorities on 22 October 1966 without having finished the studies. The graduation ceremony for the remainder took place in February 1969.[68]

COURSES FOR MILITARY REPAIR PLANTS

In the frame of the agreement from 21 July 1962, Czechoslovakia was obliged not only to provide capital construction of Syrian military repair plants (as listed in Table 5) but to ensure proper training of selected members of their future staff. The Czechoslovak Ministry of National Defence participated in this scheme for the first time as an organiser of Course 238a and 238b for 53 technicians of the communication equipment repair plant (Operation 7418). The training was contracted on 26 January 1964 as Supplement No. 2 of General Contract No. 20-13-212.[69]

Course 238a started at the Tactical-Technical Courses section on 5 May 1964, with the first group comprising 14 students; the remaining 11 Syrians were late and their studies commenced on 22 June of the same year. The training ended on 31 January 1965 with the graduation of 24 Syrian students: at the request of the Syrian authorities, Mohamed Kamel Moubayed was sent home prematurely on 9 January. This training was followed by Course 238b that took place at the ZF VAAZ. Twenty-eight Syrian trainees attended the course between 16 September 1964 and 31 May 1965. Both courses served as preparation for follow-on specialised study at the training school of the Tesla Pardubice company, the main contractor of Operation 7418. The Syrians primarily learned the Czech language, also studying mathematics, technical drawing, physics, workshop practice, material science and electrical engineering.

The Foreign Faculty of the Antonín Zápotocký Military Academy in Brno provided military-technical education for several dozens of Syrian soldiers during the 1960s. The Syrians were trained in the frame of Course 231 (military technicians in different specialisations), Course 238 (technicians of the communication equipment repair plant), Course 246 (signal communication), Course 251 (leadership of the communication equipment repair plant) and Course 258 (leadership of the communication equipment repair plant). (Photo by Martin Smisek)

Syrian students from Course 238a graduated from the company training school in January 1966, followed by their counterparts from Course 238b. Both groups subsequently attended practical training at the manufacturing plant of Tesla Pardubice that produced VXW 010 radios and B 41 tape recorders. However, local technicians were not impressed by the Syrians' performance and complained about the low quality of their work. The last stage of training, lasting five months, again took place at the ZF VAAZ, where Syrian students were familiarised with Czechoslovak and Soviet military communication equipment (e.g. R-104, R-112, R-113 and R-120 tank radios) that they would repair in Syria in the future. Course 238b was concluded on 28 April 1967.[70]

Training provided by the Czechoslovak Ministry of National Defence for Operation 7418 continued in the form of Course 251, which was contracted as Supplement No. 6 of General Contract No. 20-13-212. The training was intended for future heads of various technical departments of the communication equipment repair plant. It took place from 21 June 1965 to 11 June 1968, and was attended by eight students who already had two years of academic studies in Syria under their belt. Seven students were trained at the ZF VAAZ in the specialisation 'chief technician for repairs of communication equipment', the remaining Syrians attending training at Tesla Pardubice for the post of 'chief of production of spare parts, design, and construction of tools'. The whole teaching process lasted three years (six terms), with one year of standard basics such as the Czech language, technical drawing, technology or electrical engineering. Seven Syrians successfully passed the course and graduated from the VAAZ in June 1968. This training was complemented by that of an additional seven Syrians in the frame of Course 258, that had the same purpose and was awarded as Supplement No. 7 of General Contract No. 20-13-212. Course 258 took place between 31 May 1966 and 30 May 1969, but only five Syrians managed to graduate from it.[71]

Further training lasting six months was to be provided at the ZF VAAZ and ammunition facilities of the Czechoslovak People's Army for 21 Syrian ammunition specialists – future personnel of the ammunition maintenance facility (Operation 7419). Their education was contracted as Supplement No. 3 of Contract No. 20-21-33 and received the cover name Course 241. The training was to be carried out on behalf of the Adamovské strojírny company (main contractor of Operation 7419) during the second half of 1965. However, it remains unknown whether Course 241 ever materialised.[72]

TRAINING OF AIRCRAFT TECHNICIANS

Between 1964 and 1966, the Czechoslovak Air Force trained a total of 53 members of the Syrian Arab Air Force in the specialisation 'technician of aircraft repair plant' for general overhauls of MiG-15bis, MiG-15UTI and MiG-17F aircraft. The training was contracted in Prague on 14 December 1963 as Supplement No. 1 of Contract No. 20-25-33 and took place in Aircraft Repair Plant Kbely under the code designation Course 245.[73]

The training was divided into two phases (Course 245a and Course 245b). The first part for 22 trainees, under the leadership of Major Hanna, started on 7 September 1964. At the request of the Syrian commander, the original syllabus was extended by one month so it could include a larger amount of theory. Because of the inadequate equipment of its facility, Aircraft Repair Plant Kbely was not able to provide proper training for three technologists of radio and electronic measuring instruments. Instead, these members underwent schooling in corresponding Czechoslovak factories (Tesla Pardubice, Elektropřístroje Modřany and Sonet Teplice) from 5 October to 24 November 1964 and finished their stay in Czechoslovakia on 19 December 1964. The others were trained normally in Kbely until 29 January 1965.[74]

The second phase for 31 Syrian technicians started on 25 August 1965. Training for this group lasted from two to eight months (depending on the specialisation of each member). Course 245 ended on 25 April 1966. On the Czechoslovak side, the training was hampered by a lack of technical documentation for the MiG-17F, while most of the Syrians from the second group did not understand the English language. Contrary to the terms of the contract, the technical skills and knowledge of some trainees were at a very low level. Thus, two interpreters of Arabic had to be hastily called up and basic technical subjects outside the scope of the original syllabus had to be taught. Despite these shortcomings, Czechoslovak military officials judged Course 245 overall as a success.[75]

RETURN OF MIROSLAV MUŽÍK'S TEAM

When Course 626, the activity of Czechoslovak experts on design and construction of military airfields led by Miroslav Mužík, ended in April 1964, it took only a few months for the leadership of the Syrian Arab Air Force to realise how badly their services were needed. Thus, the Syrians were swift to sign Supplement No. 4 of General Contract No. 20-12-212. Because of additional requirements on the side of the Syrian Arab Air Force, further supplements (No. 5 and No. 7) were awarded to extend the stay of some Czechoslovak experts in Syria for one year.[76]

Code named Course 665, the undertaking started on 22 May 1965 with a departure flight to Syria. A Czechoslovak group led by Miroslav Mužík arrived in Damascus the next day shortly after midnight. On 24 May, the Czechoslovak specialists met high-ranking Syrian officers including General Dakkar (now Deputy Chief of the General Staff of the Syrian Arab Armed Forces), General Dardari (Chief of Training of the Syrian Arab Armed Forces), General Joumran (Deputy Chief-of-Staff of the Syrian Arab Air Force) and General Hafez al-Assad (Commander-in-Chief of the Syrian Arab Air Force). General Dakkar told them he needed to design a runway extension at Hama (Syria was awaiting delivery of 20 MiG-21s for a new fighter squadron), a new air base near Homs and a reserve airstrip south of Damascus (near Sanamayn or Sheikh Meskine).

Table 11: Czechoslovak experts of Course 665[80]

Rank and name	Position	Arrival in Syria	Departure from Syria
Miroslav Mužík	architect of airport objects, head of the expert group	23 May 1965	23 May 1966
František Martinec	architect of airport ground structures	23 May 1965	23 May 1966
Jiří Urbanec	expert on the design of airport structures	23 May 1965	23 May 1966
Miroslav Trnka	geological survey expert	23 May 1965	24 January 1966
Stanislav Mráz	expert on the design of runways	23 May 1965	28 March 1966
Jaroslav Desenský	expert on airport water and sewage systems	5 July 1965	23 May 1966
Lieutenant Colonel Josef Kroulík	expert on storage of motor and aviation fuel	15 August 1965	21 February 1966
Jiří Knapp	expert on airport electrical systems	15 August 1965	23 May 1966
Josef Kuřátko	draughtsman	15 August 1965	23 May 1966
Lieutenant Colonel Jan Šnajdr	translator/interpreter	15 August 1965	21 February 1966
Captain Jan Šťastný	translator/interpreter	8 March 1966	23 May 1966

The Czechoslovak specialists went straight to the work, and one of the first things they did was redesign a building for pilots at Bley reserve airstrip. In early 1964, it had been designed by the Czechoslovak team in Syria as an above-ground structure. However, because of its proximity to the border with Israel, Syrian designers changed the project to an underground building. Several proposals for improvement suggested by the Czechoslovak experts were promptly accepted by the Syrians. In the meantime, all buildings designed in the frame of Course 626 were in the process of construction. During May, Miroslav Mužík met General Wadih Moukabari, former Commander-in-Chief of the Syrian Arab Air Force. Although in retirement, he was not only highly respected within the top ranks of the Syrian Arab Air Force but had some insider knowledge of future plans for the development of the service. During the discussion, Moukabari told Mužík that plans for the establishment of an air academy at Kweres were again being considered.[77]

A study for a runway extension at Hama and a new air base was finished in early August 1965. At the same time, works on the design of a reserve airstrip near Sheikh Meskine were discontinued due to its poor strategic location. Despite Czechoslovak objections (high construction costs, construction complications and unsuitable soil), a new area for the airstrip was found at Saham al-Jawlan. The Czechoslovak team continued on work on various projects, including a proposal for watertight isolation for an underground command post that was prepared in cooperation with a representative of Italian company IMPER. In September, works started on design proposals for an air control tower, communication centre, officer club and stand for 16 jet aircraft (Su-7s or MiG-21s) at Hama Air Base. Further projects encompassed the design of buildings for the Saham al-Jawlan reserve airstrip and new hardened aircraft shelter for the Su-7. On 9 September, several Czechoslovak specialists carried out supervision of the construction site of Cigale reserve airstrip, which had been designed by them two years previously. Most of the structures were now built, with aircraft shelters under construction.[78]

Czechoslovak experts prepared several layouts for Hama Air Base, one of them being accepted by the Syrian Arab Air Force headquarters for implementation in early December 1965. Simultaneously, the requirement for the construction of a new air base near Homs was scrapped. Instead, the T4 air base was to be enlarged. The Czechoslovak team was tasked to prepare a preliminary project for a local administrative building, quarters for troops, a cookhouse, medical aid station, washrooms, depots, garages, shelters for 30 aircraft, an illumination system for the runway, interconnecting roads and underground utilities. According to a Czechoslovak study, the current aircraft stand at T4 enabled the operation of up to 45 fighter aircraft. The general layout for the enlargement of the air base prepared by the Czechoslovaks was accepted by General Mohammad Assad Moukiiad, new Commander-in-Chief of the Syrian Arab Air Force, on 12 March 1966.

Until the end of their stay in Syria in May 1966, the Czechoslovak specialists prepared complete building design documentation for the Saham al-Jawlan reserve airstrip, building design documentation for Hama Air Base (runway and taxiway with drainage, underground utilities, command post, underground command post, air traffic control tower, workshop extension of one hangar, fuel depots, photo laboratory, object for reserve power-generating set, three transformer buildings and several objects for radio navigation systems) and a general layout of the T4 air base, with preliminary projects of buildings and building design documentation for local underground utilities and two buildings (communication centre and object for power-generating set).[79]

TRAINING OF PARATROOPERS

Around late 1964, Czechoslovakia became one of the contenders for the supply of parachutes and accessory equipment for the sole Syrian airborne battalion. In order to support the business activity of the HTS, the Ministry of National Defence decided to dispatch one of its experts to Syria in January 1965 for a demonstration of Czechoslovak parachutes PD-47, ZVP-300, PTCH-4 and OVP-450B. The task was entrusted to Major Miroslav Bílek, an experienced instructor of Research and Testing Centre 031 (*Výzkumné a zkušební středisko 031*), who trained Cuban paratroopers in 1962.[81]

Czechoslovakia eventually managed to secure a deal for delivery of several types of parachutes (including the brand-new OVP-450B combat parachute and associated ZVP-300 reserve parachute) to Syria, although precise details of the delivered numbers remain unknown. Prague beat off competition from West Germany, which was offering T-10 parachutes. Apparently, Major Bílek left a lasting impression in Damascus, because the Syrians 'ordered' him too. The training of Syrian parachute instructors was contracted separately as Supplement No. 6 of General Contract No. 20-12-212, with Syrian representatives specifically requesting Bílek as the instructor for their troops.

Thus, under the code name Course 668, he was sent to Syria together with an interpreter of French and English, Lieutenant Colonel Igor Huleja from the Tactical-Technical Courses of the Higher Aviation Training School. Both arrived at Damascus International Airport (Mezze) on 27 June 1965 at 1:30 a.m. During the same day, they were introduced to General Moukabari, and together they discussed the programme of the parachute training. On 28 June, the Czechoslovak team worked out precise details of the instruction with the commander of the airborne battalion, Major Mohamed Rahmoun. Actual training started on Tuesday, 29 June, with the OVP-450B and ZVP-300 parachutes, together with the KAP-3 automatic opening device. Beginning the same day, Czechoslovak officers were accompanied by Vladimír Malý, a factory technician from KRAS Chornice, manufacturer of the delivered parachutes.

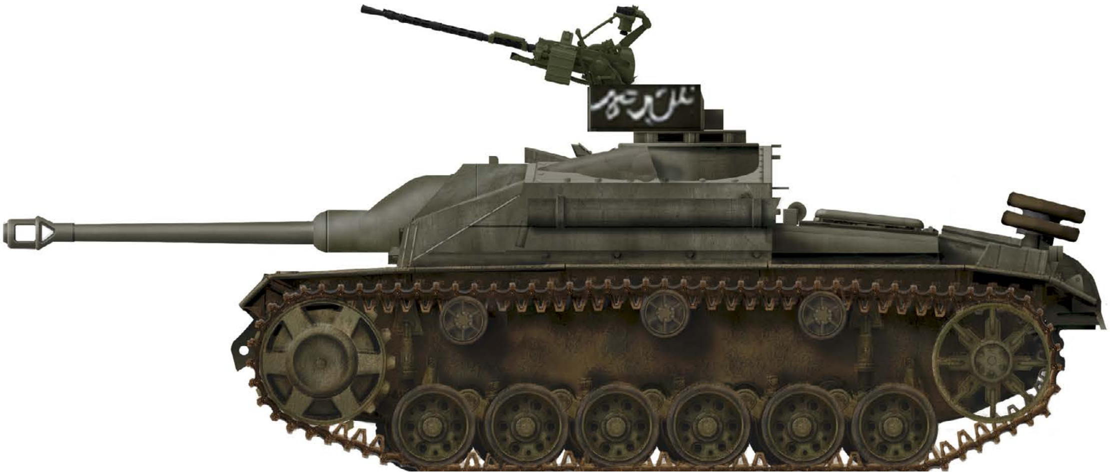
Training jumps with OVP-450B combat parachutes started on 3 July, using an Il-14T transport aircraft which was later complemented by a Mi-4 transport helicopter for jumps with PTCH sport parachutes. The training flights were undertaken from Mezze, with the drop zone located in the desert some 45km (28 miles) north-west of the air base. In total, Syrian instructors accomplished 40 jumps with OVP-450Bs and 12 jumps using PTCH parachutes. The training was hampered by the minimum knowledge of foreign languages of the Syrian trainees. Lectures by Bílek were translated by Huleja into English, and this was then translated into Arabic by Syrian officers. Huleja's simultaneous knowledge of French and English saved the day on many occasions. The Czechoslovak advisory team trained 29 Syrian paratrooper officers and sergeants in three specific groups: instructors for the OVP-450B, ZVP-300 and KAP-3 (including Major Mohamed Rahmoun), instructor riggers for all delivered parachutes and KAP-3s, and instructors for PTCH-3A and PTCH-5 sport parachutes (including associated PZS-57 and PZS-62 reserve parachutes). Course 668 was successfully finished on 18 July 1965. Both Czechoslovak officers and Vladimír Malý returned to Czechoslovakia the following day.

Major Bílek was surprised by the complete lack of cooperation between Syrian airborne units and the transport and helicopter squadrons of the Syrian Arab Air Force that were to provide their deployment into combat. While he considered the capabilities of Syrian aircrews of Il-14Ts and Mi-4s as world-class, the Syrian paratroopers had minimal practical jump experience and low knowledge related to parachute training. However, officers of the airborne battalion were well aware of the deficiencies of their unit. Since Course 668 provided mainly familiarisation instruction related to the introduction of new equipment, further training was needed and duly requested. Again, the Syrians demanded the services of Bílek. Czechoslovak officials from the HTS gladly accepted the request, so both officers returned to Syria during the following year.[82]

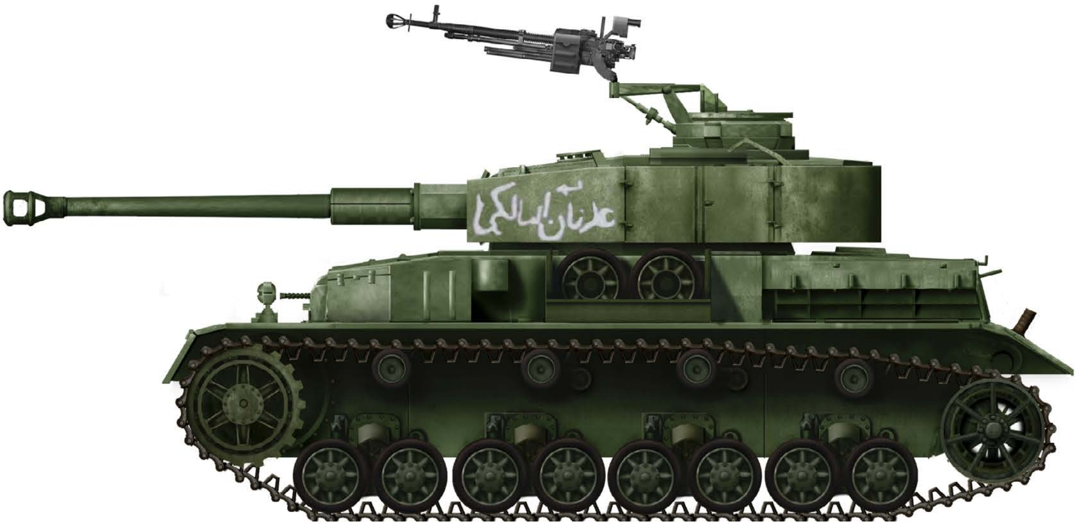
A Syrian paratrooper during a training jump using the OVP-450B parachute in the 1970s. The OVP-450B was developed at KRAS Chornice in 1963 primarily for training and combat jumps from airplanes and helicopters with a maximum parachute load of 120kg (265lb) and up to a speed of 350km/h (217mph). (via Martin Smisek)

This time, their activities received the Czechoslovak cover name Course 674. Bílek and Huleja arrived in Damascus on 6 April 1966 and were accommodated at the Ambassador Hotel in the city. On the next day, following a meeting with a local representative of the HTS at the Czechoslovak embassy in Damascus, they were introduced to General Dardari of the General Staff of the Syrian Arab Armed Forces and immediately thereafter transported to the airborne battalion, a cadre of 17 parachute instructors of which they were tasked to train. The aim of Course 674 was to instruct and train its participants so that they would be able to perform and control the training of their troops independently.

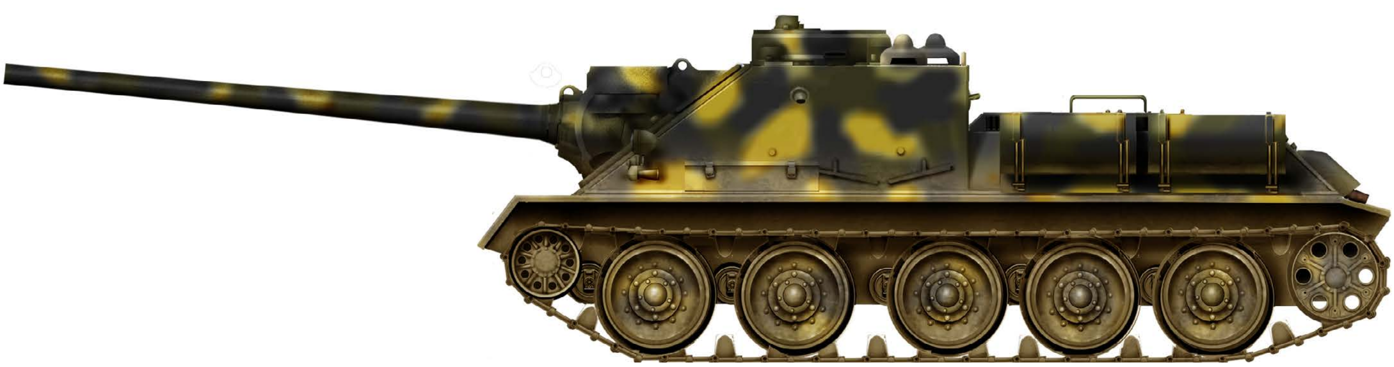
The training started on 9 April with the theoretical introduction of several types of parachutes (ZVP-300, PZS-57, PZS-62, PTCH-3, PTCH-5 and OVP-450B), the KAP-3 automatic opening device and KP-23 parachute oxygen apparatus. After further theoretical instruction, the practical training with actual jumps from Il-14T transport airplanes and Mi-4 transport helicopters started on 20 April. According to the training syllabus, each Syrian trainee was to perform seven training jumps, three jumps with weapons, a night jump and seven free-fall jumps. However, contrary to the terms of the contract, the number of Syrian participants was increased from 10 to 17, and the commander of the course, Lieutenant Iliya Fahed,



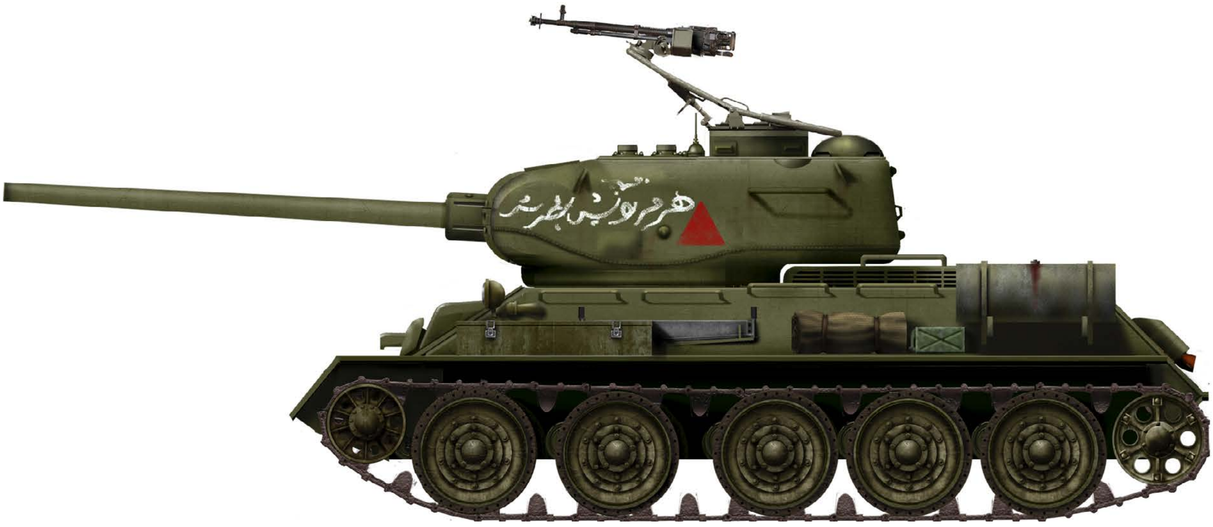
The Czechoslovak Army inherited a significant number of abandoned or incomplete Sturmgeschütz III, mostly in the Ausf. G variant (StuG III Ausf. G), from the Wehrmacht, after the Second World War. A total of 125 selected vehicles were then overhauled and pressed into service under the designation vz. 40/75N, subsequently changed to SD-75/40, to better describe their primary armament (75mm anti-tank gun). The last of these entered service in 1950. Five years later, the first batch of 12 was sold to Syria, followed by 20 additional examples in 1956. They initially served with the 70th Armoured Brigade of the Syrian Arab Army, before being replaced by T-34/85s, and reassigned to reservist units deployed along the Golan Heights. (Artwork by David Bocquelet)



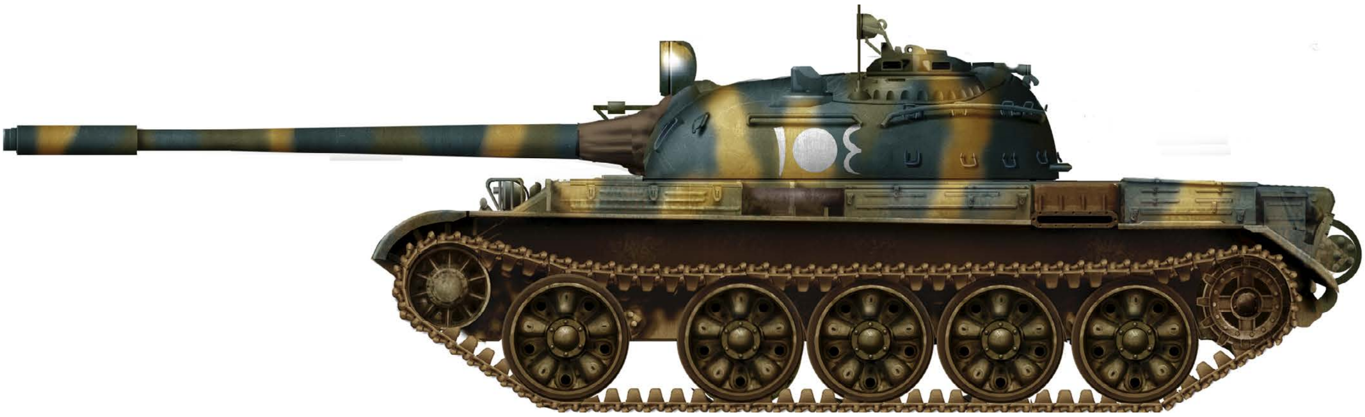
Collecting a large number of Panzerkampfwagen IV (PzKpfw IV) of diverse sub-variants after the end of the Second World War, the Czechoslovaks took the logical decision to press them into service with their own army. Starting in 1949, a total of 102 were overhauled and redesignated as the T-40/75 (this number included at least three StuG IVs rebuilt into conventional tanks). All were replaced by Soviet-made equipment by 1954 and stored, but a year later 45 examples were sold to Syria. Amongst them were vehicles of G, H, and J variants, but also older Ds, re-equipped with the 75mm KwK 40 anti-tank gun. Like the StuG IIIs, they originally served with the 70th Brigade, until being handed over to reservist units deployed on the Golan Heights: with most of the latter being staffed by ethnically cleansed Palestinians, they became involved in many clashes with the Israelis in the mid-1960s. All ended serving as 'pillboxes', and most were knocked out or captured during the June 1967 Arab-Israeli War. (Artwork by David Bocquelet)



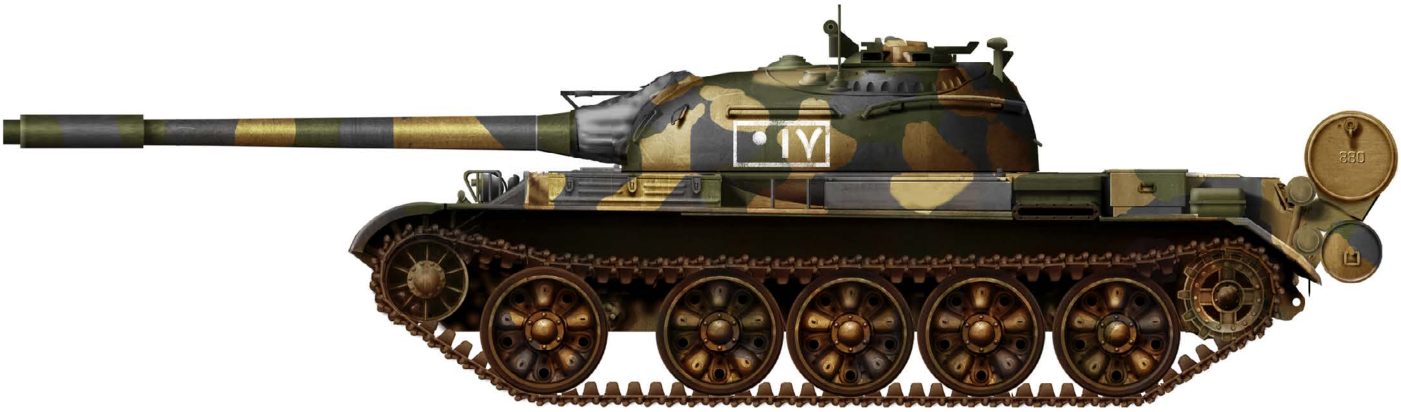
In addition to Egypt, Czechoslovakia exported 36 SD-100s to Syria in 1956. Considered 'tanks' by the Syrians, they are not known to have seen combat during the June 1967 Arab-Israeli War. Worn out, most had their engines removed (the space was filled by additional ammunition) and were deployed as 'pillboxes' along the armistice lines with Israel. Under such conditions they saw much more action, both during the War of Attrition in 1968–1973 and during the October 1973 War. Several were captured and taken to Israel as a consequence: for example, during Operation Kiton-10, in June 1970, the Israeli Defense Force claimed the destruction of 30 Syrian tanks and is known to have seized at least one SD-100, which was then taken to Israel. This example was captured in October 1973. (Artwork by David Bocquelet)



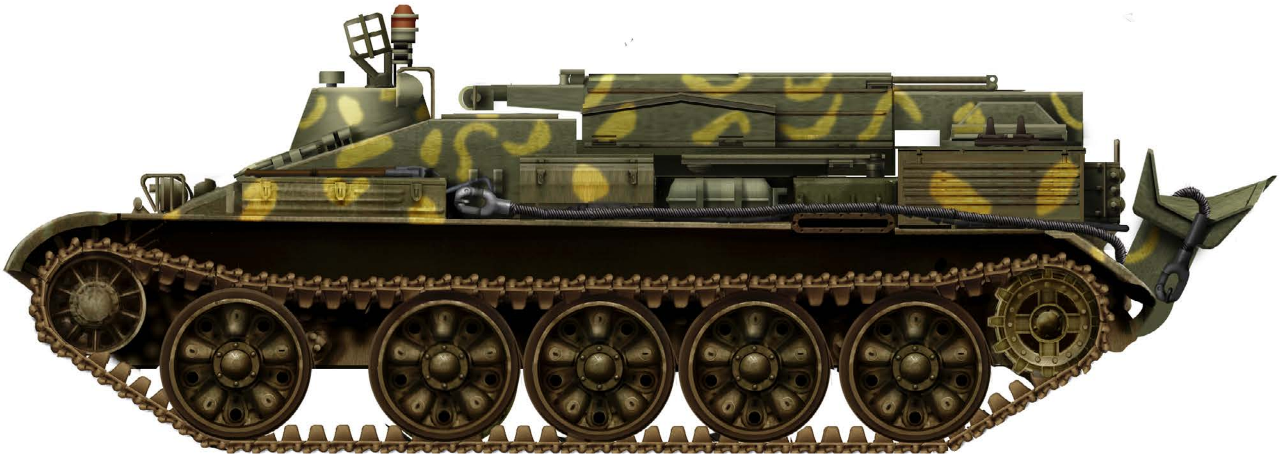
The ČKD Sokolovo Works in Prague and Závody J. V. Stalina in Martin manufactured 2,736 T-34/85 tanks under licence between 1952 and 1956. Unsurprisingly, many were exported, including 120 to Syria in 1956, and another 100 in 1970. The vehicle shown here was operated by the sole battalion of the 70th Armoured Brigade that became involved in the fighting on the Golan Heights during the June 1967 War with Israel. Surviving examples were subsequently deployed along the armistice lines and saw additional action in 1968–1973, and during the October 1973 War, even if by the time most had shared the fate of Syrian SD-100s: they had their engines removed and replaced by additional ammunition racks. (Artwork by David Bocquelet)



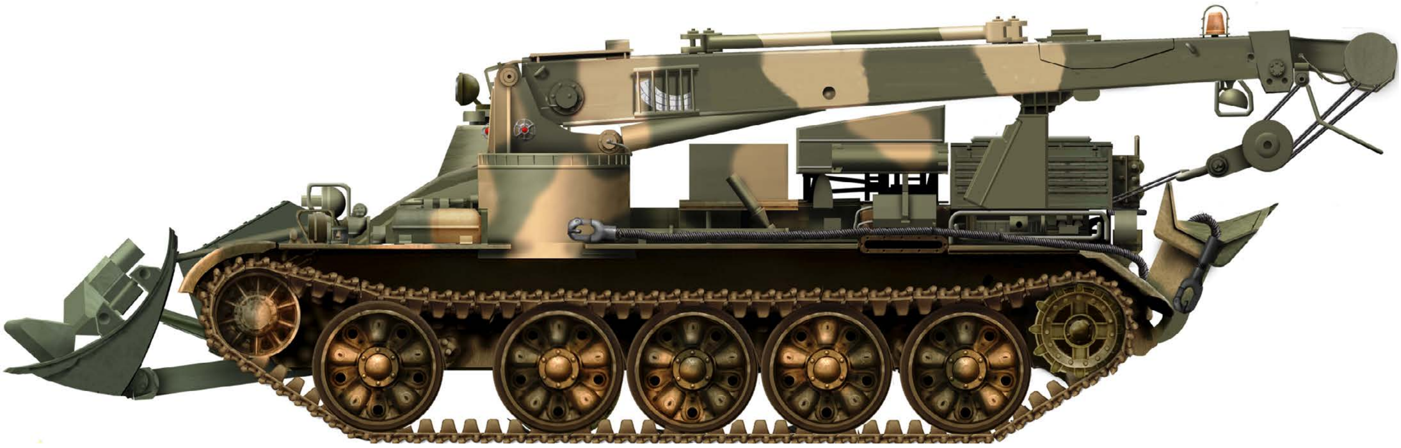
Through the 1970s and 1980s, Turčianské strojárne manufactured no fewer than 7,197 T-55 and T-55A medium tanks for the Czechoslovak People's Army and for export. The reason for such a success was that the vehicles produced in Czechoslovakia enjoyed the reputation of being of much better quality and reliability than the Soviet originals. Over 900 were exported to Syria, which, starting in 1971, used them to form the backbone of tank battalions assigned to the mechanised infantry formations of its army. Typically, they were delivered to Syria painted in dark olive green overall, or similar colours: Syrians would then add splotches or stripes of sand and blue-green (or, sometimes, grey). This artwork shows a Syrian T-55 from the October 1973 Arab-Israeli War. (Artwork by David Bocquelet)



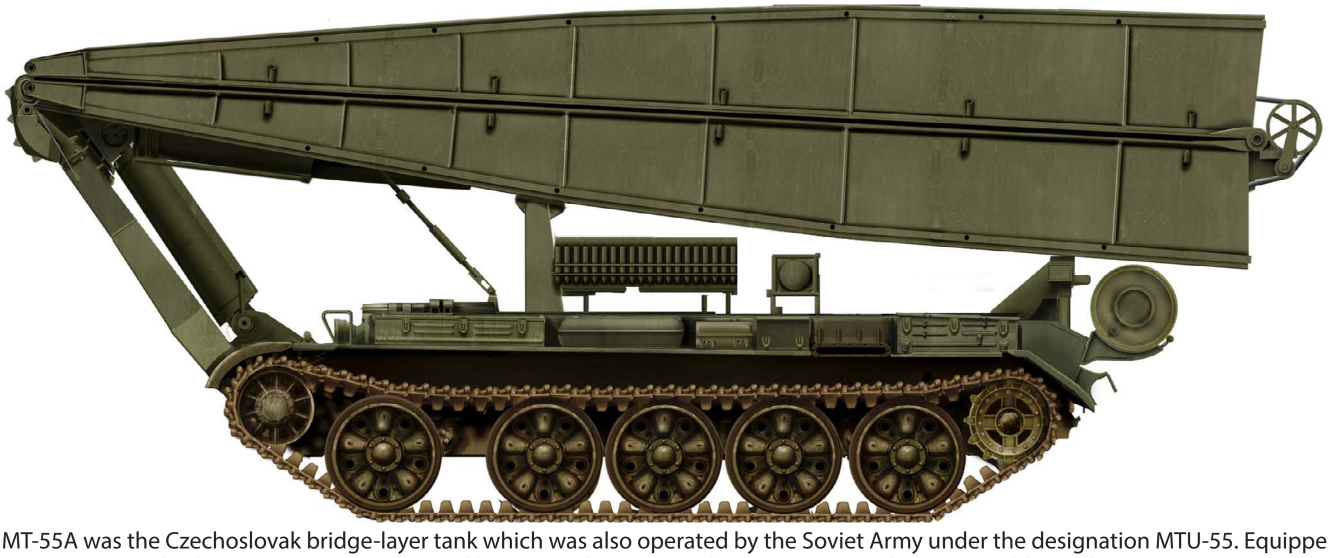
In addition to newly built T-55s, in 1970 the Syrian Arab Army acquired 154 T-54AR tanks from the stocks of the Czechoslovak People's Army. Outwardly, they differed very little from T-55s – only by the bigger ventilator cover on the top centre of the turret. Like T-55s, they were originally all painted in dark olive green, to which the Syrians added splotches in sand and – in this case – grey. By 1973, all wore very prominent turret numbers in white (017 in this case) frequently applied within a white box. (Artwork by David Bocquelet)



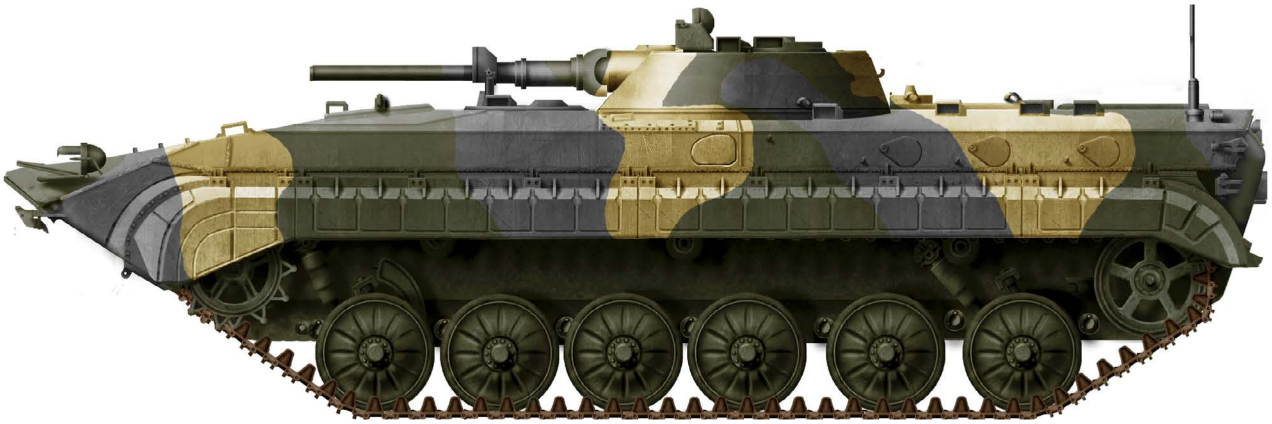
As well as tanks, Turčianské strojárne manufactured specialised vehicles based on the chassis of the T-55 medium tank. Foremost amongst these was the VT-55 armoured recovery vehicle, 359 of which were sold to Syria between 1971 and 1979. At platoon of three was assigned to the maintenance section of every tank battalion. VT-55s saw heavy utilisation in all the subsequent conflicts involving Syria – from the Golan Heights of 1973, via Lebanon of 1976-2006, to the Syrian War ongoing since 2011. Many were left in dark olive green overall, but at least as many received widely varying camouflage patterns, sometimes including thick wavy stripes, other times relatively short splotches, as illustrated here. (Artwork by David Bocquelet)



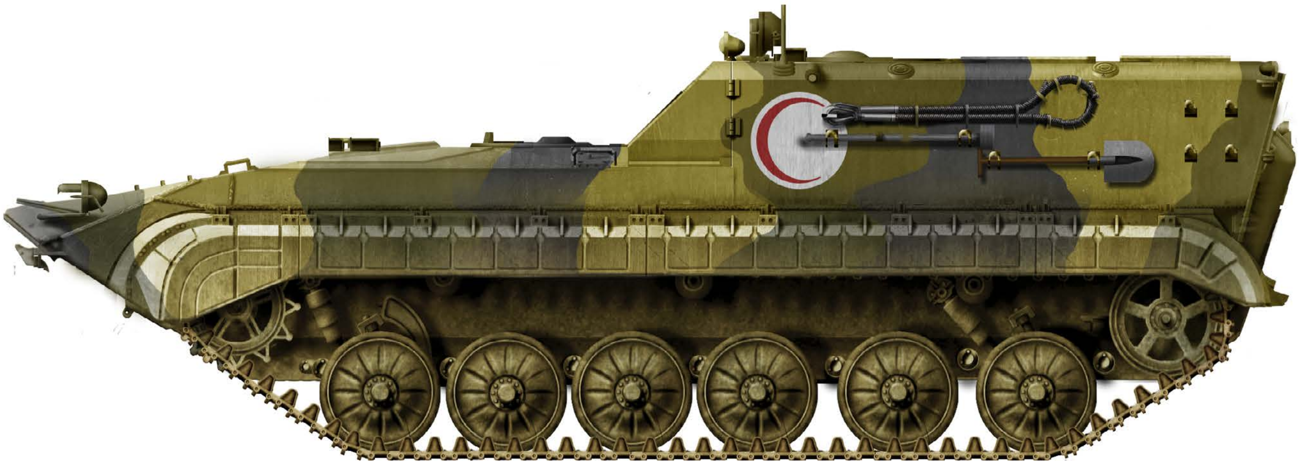
The Czechoslovak armoured crane vehicle, which the Soviets called the BTS-3 Medium Armoured Tractor, was designated the JVBT-55A. It was equipped with a 15t crane, a winch, and the BTZ-55 dozer blade. Exactly 188 JVBT-55 vehicles for Third World countries were manufactured starting in 1973, and 61 of these were acquired by Syria during the second half of the 1970s, where at least one was assigned to the maintenance section of every armoured battalion. Like VT-55s, they have seen heavy utilisation in all the conflicts involving Syria since, including Lebanon from the 1980s into the 2000s, and in the ongoing Syrian War. This example is shown wearing a camouflage pattern in wide stripes of orange atop of its original dark olive green colour – as seen during the withdrawal of Syrian troops from Lebanon in 2005. (Artwork by David Bocquelet)



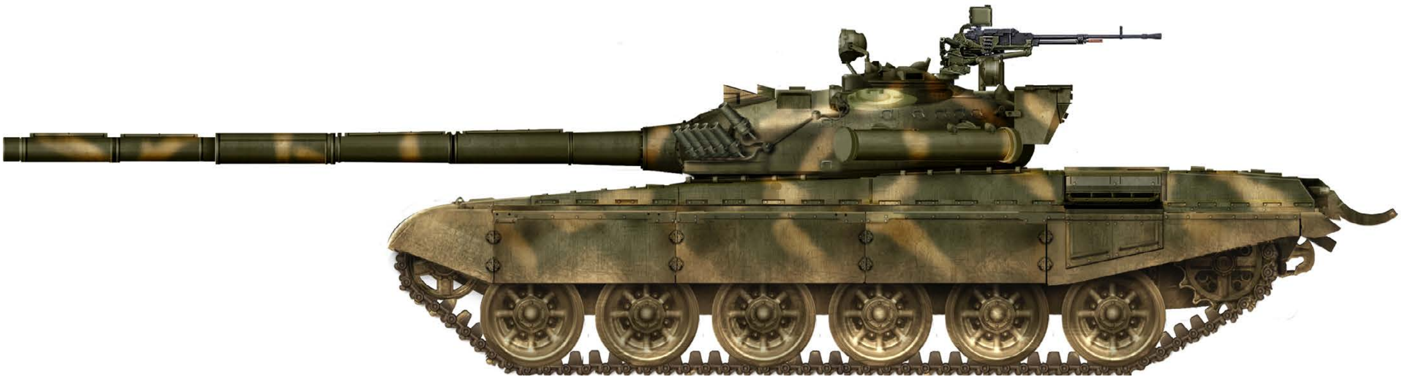
The MT-55A was the Czechoslovak bridge-layer tank which was also operated by the Soviet Army under the designation MTU-55. Equipped with a scissors-type bridge, 1,278 were constructed by Turčianske strojárne between 1969 and 1983. An additional 191 MT-55s were manufactured for Third World countries between 1971 and 1983. The Syrian Arab Army acquired exactly 30 MT-55s in 1972, due to the need to bridge the big anti-tank ditch protecting Israeli positions along the ceasefire line on the Golan Heights during the first hours of the October 1973 Arab-Israeli War. Most of the Syrian MT-55s were knocked out during that operation (a handful were captured intact and pressed into Israeli service) and the remaining examples have rarely been seen since. As far as is known, none of the Syrian MT-55s ever received any kind of camouflage colours. (Artwork by David Bocquelet)



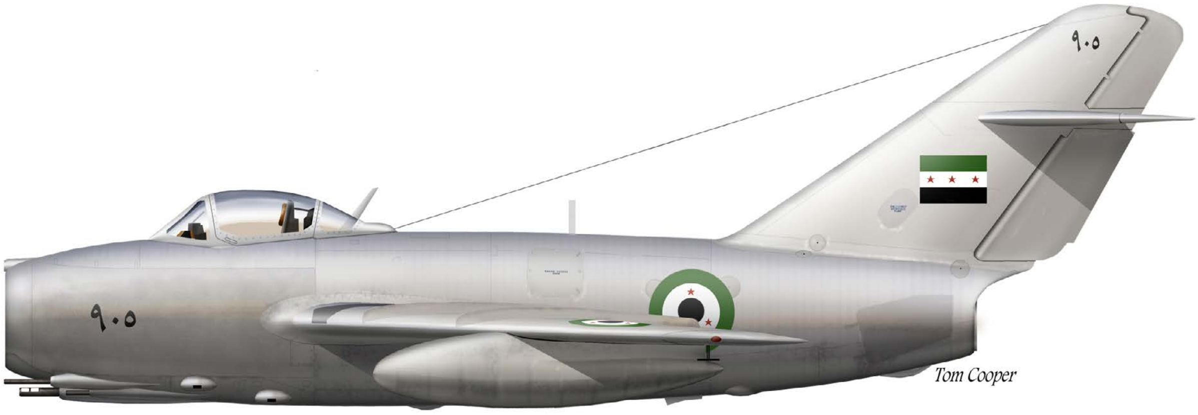
After acquiring BMP-1 infantry fighting vehicles from the Soviet Union in the early 1970s and putting these to test during the October 1973 War, Damascus followed up with successive orders for 1,275 Czechoslovak-manufactured BVP-1s. About 600 of these were delivered before economic problems in Syria and the resulting inability to service amassed debts prompted Prague to stop further shipments. As far as is known, most of the Czechoslovak-made BVP-1s were assigned to the 3rd Armoured Division and saw intensive combat deployments during uprisings in Syria in 1981-1982, and in Lebanon during 1982. The last examples – including the one illustrated here – were seen in action early during the ongoing Syrian Civil War: all seem to have received relatively simple camouflage patterns including dark sand and medium grey applied atop the olive green overall livery in which they were delivered. (Artwork by David Bocquelet)



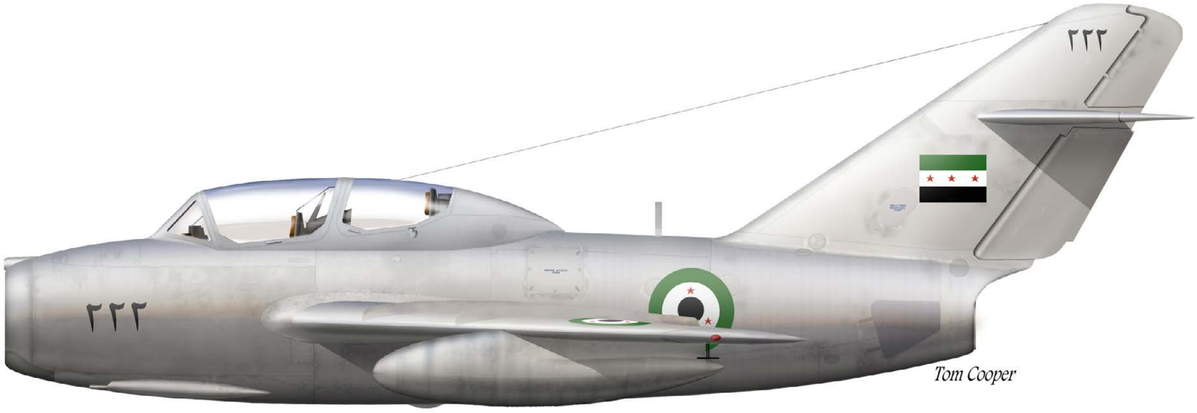
Around 200 Czechoslovak-manufactured AMB-S tracked ambulances, built on the chassis of BVP-1 infantry fighting vehicles, were sold to Syria during the early 1980s: two or three were assigned to the medical department of every mechanised battalion. Little is known about their early service, but they have seen intensive deployment during the Syrian Civil War ongoing since 2011. Syrian AMB-S seem to have received a wide range of very different camouflage patterns, probably depending on the unit to which they were assigned and availability of colours. While all were applied over their original olive green livery, some consisted of dark sand and medium grey (as shown here in an example of a vehicle photographed in Damascus in autumn 2011), and others of diverse shades of brown. (Artwork by David Bocquelet)



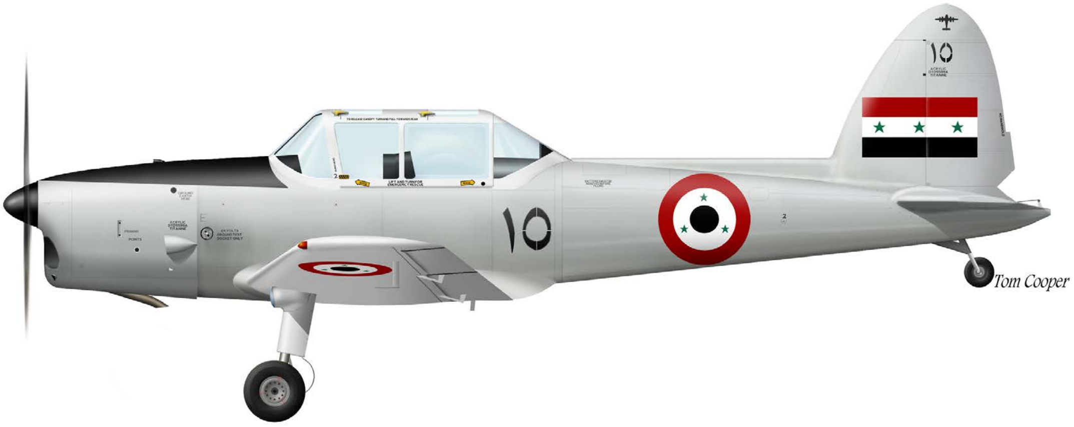
The T-72M1 main battle tank represented the most advanced vehicle of this type ever ordered by Syria from Czechoslovakia. A total of 50 T-72Ms were delivered in 1985, while 152 T-72M1s and T-72M1K command tanks were delivered by Prague to Damascus in the 1990–1992 period. Deliveries continued after the breakup of Czechoslovakia, with the remaining 63 T-72M1 tanks shipped from Slovakia in 1993. All arrived in Syria painted in olive green overall and were assigned to the three armoured brigades and one mechanised brigade of the notorious 4th Armoured Division. Considered the best-equipped and trained combat unit of the Syrian Arab Army, this unit is nominally commanded by Maher al-Assad, and thus operates outside the chain of command of the Syrian Ministry of Defence. Since 2011, they have seen extensive combat deployment on all battlefields of the ongoing Syrian Civil War: about 20 surviving examples have since received extensive add-on armour. (Artwork by David Bocquelet)



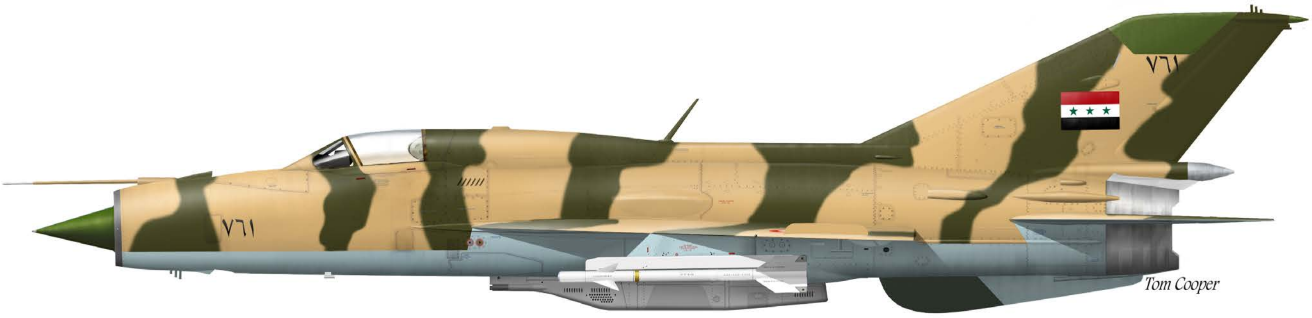
Because Syria lacked suitable air bases, Damascus and Prague eventually agreed the first 20 MiG-15bis and four MiG-15UTIs ordered by Syria would be delivered to Egypt, where the first class of SyAAF pilots was to be converted to the new type. The aircraft wore the standard 'silver grey overall' livery of this period, which actually consisted of two layers of clear lacquer, mixed with 10 percent and 5 percent aluminium powder, respectively. They received serials in the range 901 upwards. About 50 percent were destroyed during the Suez War of 1956, and the survivors were subsequently donated to Cairo. This is a reconstruction of the example with the serial number 905, delivered to Egypt while still wearing Syrian national markings. The aircraft remained in service with the United Arab Republic Air Force – i.e. in Egypt – at least into the early 1960s. (Artwork by Tom Cooper)



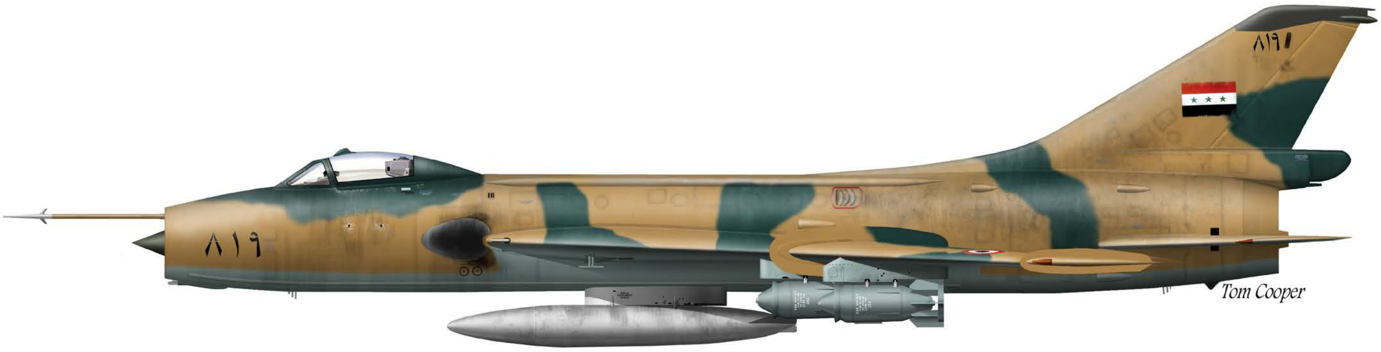
Due to the lack of contemporary photographs, next to nothing is known about the appearance of the first four Czechoslovak-built MiG-15UTIs (locally designated CS-102s) sold to Syria. Certainly enough, their overall livery was the same 'silver grey' as applied on the single-seat MiG-15bis, and they wore the same set of national markings, including roundels in six positions (on top and bottom surfaces of the wing) and fin flashes. The greatest uncertainty is related to their serials: according to one version, these were two-digit only, and ranged from 01 to 31; according to another, they consisted of three digits, starting with 1 or 2. However, most likely such reports are based on the practice of applying only the 'last two' of the complete serial number on noses of much-better-known MiG-17Fs, acquired from the USSR two years later. This reconstruction is based on deduction from available information and photographs of a Syrian MiG-15UTI from subsequent times, all of which show them wearing serials in the range 200 upwards. (Artwork by Tom Cooper)



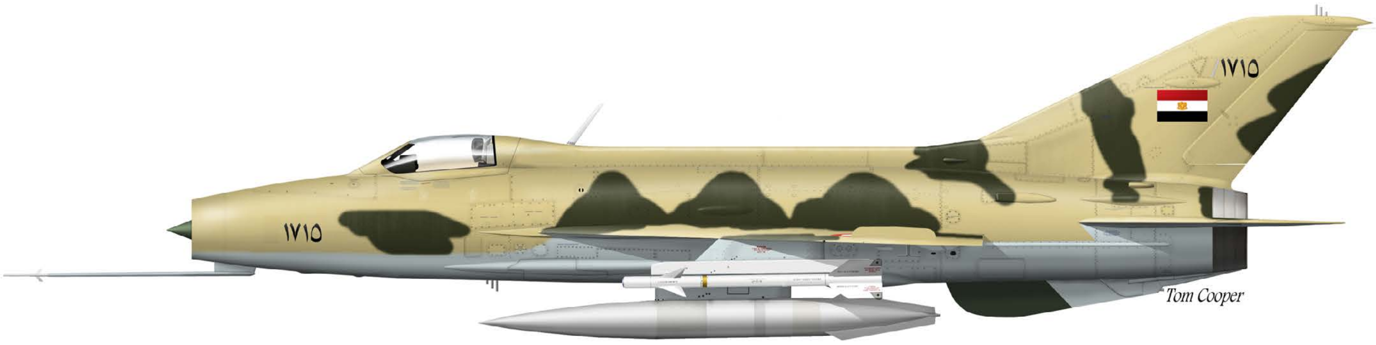
When the Syrian Arab Air Force was re-established after the dissolution of the United Arab Republic in September 1961, it found itself in a very bad condition. The mass of its former aircraft, training tools and other equipment had been taken away to Egypt. In turn, the Egyptians brought all of their DHC-1 Chipmunk T.Mk 51s to Syria, and the Syrians managed to collect all of their own Chipmunks acquired in the 1950s: thus, these British-designed, but Canadian-manufactured aircraft served as basic trainers for the new air force. This is how it happened that a group of Czechoslovak instructors trained SyAAF pilots to fly them in 1963. As far as is known, all the Syrian Chipmunks retained their high-speed silver overall finish during this period and two-digit serials. While the yellow 'trainer bands' seem to have been removed from the rear fuselage and wings, new was their national marking as in use by the SyAAF in 1961–1972, consisting of red, white, and black fields, with three green stars. (Artwork by Tom Cooper)



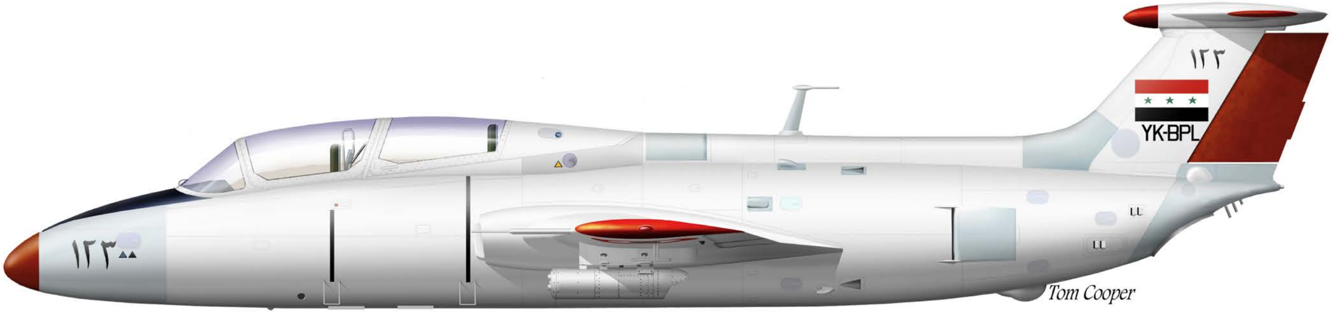
In the summer of 1969, a group of Czechoslovak Air Force advisors ran Course 740 for SyAAF units operating MiG-17s, MiG-21s and Su-7s. Undertaken in great haste due to increasing tensions with Israel, the aim of the course was to introduce the Syrians to new tactics. One part was organised for the staff of the 7th Air Brigade at Mezze AB starting from 1 September 1969; another on Su-7BMKs at T4 AB from 11 September; and one at Dmeir AB for the staff of the MiG-21 equipped 3rd Air Brigade in December of the same year. As a result, Czechoslovak instructors came to fly MiG-21PFMs of the Syrian Arab Air Force. The examples in question were camouflaged immediately after the June 1967 Arab-Israeli War, in light- or mid stone (BS381C/361 or BS381C/362) and olive drab (BS381C/298) on top surfaces and sides, and the local version of the light admiralty grey (BS381C/697) on undersurfaces, with serials in black in the range 701-799. Syrian MiG-21PFMs were compatible with the then brand-new GP-9 gun-pod, containing a twin-barrel 23mm cannon with its ammunition. (Artwork by Tom Cooper)



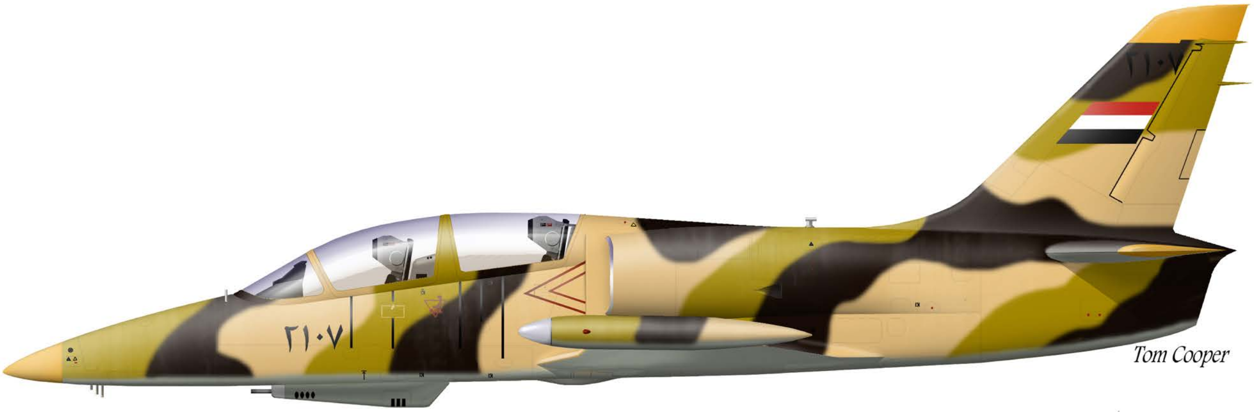
By the time SyAAF Su-7BMKs were flown by Czechoslovak instructors during Course 740 staged for the crews of the 50th Air Brigade at T4 AB in September-December 1969, these Syrian aircraft already wore a camouflage pattern applied in the then new colours orange-sand and blue-green on top surfaces and sides. A local version of light admiralty grey was still used on undersurfaces. Considering the Czechoslovak influence in Syria of the time, it is perfectly possible that the orange-sand in question was based on the Czechoslovak colour 6600 *žluť dubová*, and the blue-green colour on 5400 *zeleň tmavá* (dark green). Serials of the jets in question were in the range 801–820, and – as usual for the SyAAF – applied on the front fuselage and near the tip of the fin. As tradition since the reestablishment of the Syrian air force in 1962, no roundels were applied on the fuselage. Following Egyptian modifications introduced in 1968, they had an additional underwing hardpoint (for a total of four, compared to the original total of two), and a rear-view mirror atop the cockpit transparency. (Artwork by Tom Cooper)



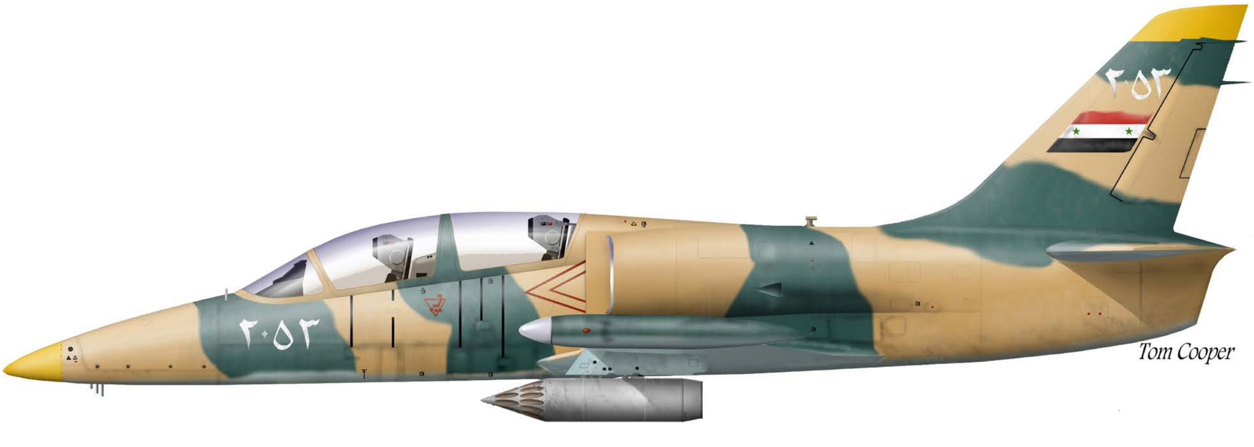
By 1973, Czechoslovakia was out of the business of manufacturing combat aircraft. Thus, when Moscow called for all members of the Warsaw Pact to support the Arab war effort against Israel, Prague could only participate through donating 12 locally manufactured MiG-21F-13s of the Czechoslovak Air Force. The jets were transported to Kweres AB, assembled and test flown by Czechoslovak personnel, and then handed over to the SyAAF. As far as is known, in Syrian service they received a camouflage pattern similar to that applied on MiG-21Ms and MiG-21MFs of that period, consisting of beige (BS381C/388) and olive drab (BS381C/298) on top surfaces and sides, and light admiralty grey (BS381C/697) on undersurfaces. Soviet-made R-3S (ASCC/NATO-code 'AA-2 Atoll') infrared homing air-to-air missiles were from Syrian stocks: the sole remaining armament of the type consisted of a single 30mm NR-30 gun, installed internally. (Artwork by Tom Cooper)



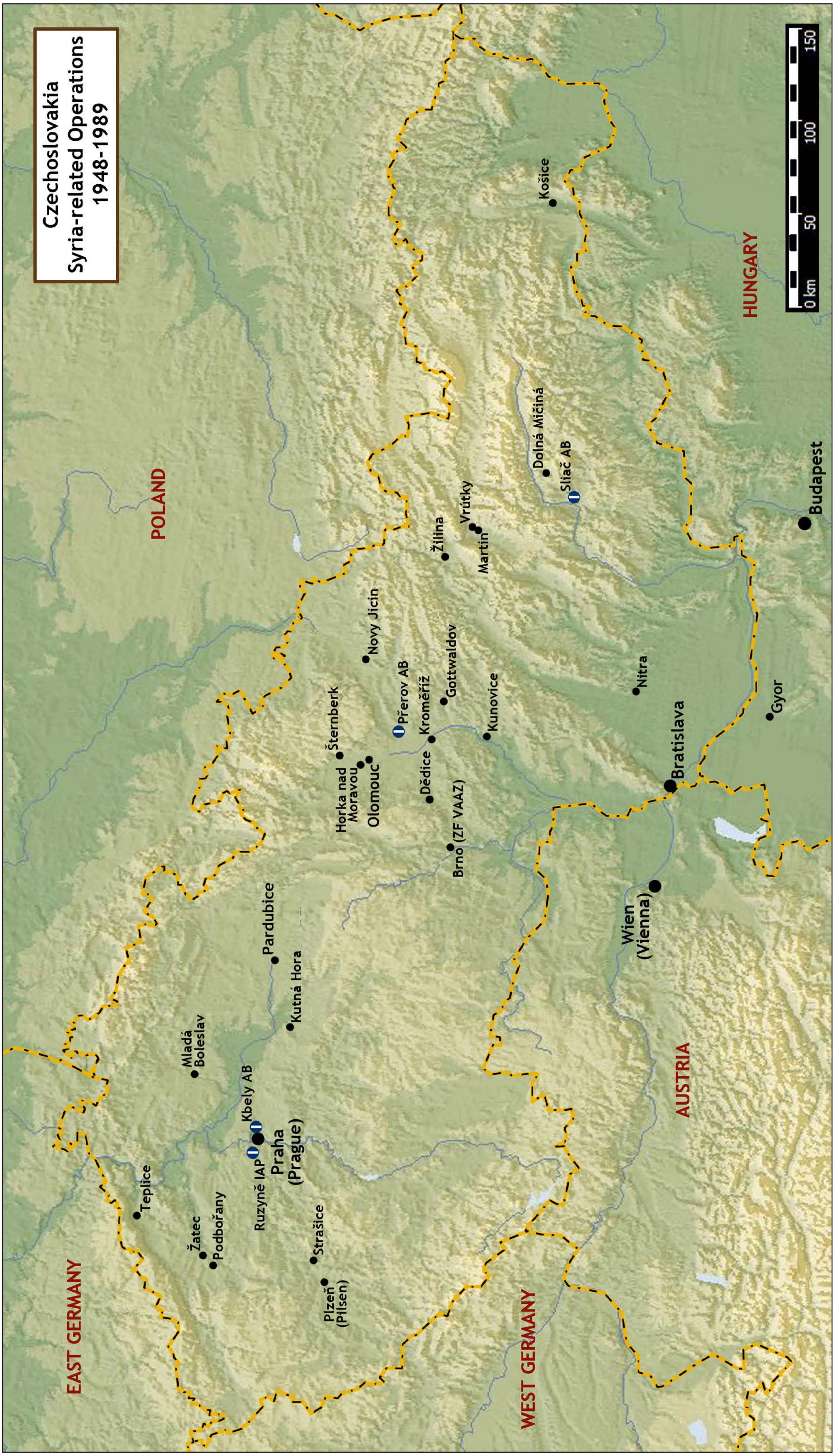
Between 1964 and 1971, Syria acquired 78 L-29 Delfins, becoming not only the launching customer for the type in the Middle East, but one of the largest importers of the type. All the Syrian Delfins were left in 'bare metal overall' livery, which actually consisted of two layers of clear lacquer, mixed with 10 and 5 percent aluminium powder, respectively. Nose cap, wing- and fin-tips were painted in bright red: later on, some had their rudders painted in the same colour. While lacking internal armament, they could be armed with Czechoslovak-designed and -manufactured RB-57/4M rocket pods, for four S-5M unguided 57mm rockets, as shown here. With the type serving only as an elementary and advanced jet trainer at the Air Force Academy at Nayrab AB, and then Kweres AB, these were used for training purposes and, according to Czech sources, L-29s were also used for patrol duties along the Syrian-Lebanese border. (Artwork by Tom Cooper)



Following the acquisition of 55 L-39ZOs, Syria purchased a total of 44 L-39ZA.2s; a variant armed with a 23mm gun installed under the cockpit, in addition to four underwing pylons rated for a load of 250kg (outboard hardpoints) and 500kg (inboard pylons) respectively. Both variants originally served with the Air Force Academy at Kweres AB, where they were utilised for elementary and advanced jet training and as weapons trainers. During the 1950s to 1980s, Czechoslovakia had its own colour standards; correspondingly, all Syrian L-39s were originally painted in the colours 6600 *žluť dubová* (dark yellow sand), 6700 *okr světlý* (light ochre), and 2880 *hněď kaštanová* (dark chesnut), applied according to a standardised pattern for this type on top surfaces and sides and 1010 *šeď pastelová* (cream grey) on undersurfaces. As indicated by its serial (2107) and the GSh-23 gun under the front cockpit, this jet was a L-39ZA. (Artwork by Tom Cooper)



Since the mid-2000s, The Works at Nayrab AB (the military side of Aleppo International) have overhauled all remaining L-39s of the SyAAF. Aircraft also wear the new camouflage pattern, consisting of orange-sand and blue-green colours on top surfaces and sides, and light blue-grey on undersides. The Works were besieged by insurgents from 2012 until 2015, but as soon as the siege was lifted (with Iranian support), the facility resumed its operations: since that time, at least 30 L-39s have been pushed through overhauls. In the course of these, nearly all were adapted for the carriage of B-8M pods for unguided 80mm rockets as illustrated here: together with the 23mm guns of L-39ZAs, these have earned them the nick-name of 'machine-gun-armed jets' amongst the insurgents. With North Korean help, about a dozen of their crews have been qualified for nocturnal operations with the help of night-vision googles since spring 2016. (Artwork by Tom Cooper)



Czechoslovakia
Syria-related Operations
1948-1989

EAST GERMANY
POLAND
WEST GERMANY
AUSTRIA
HUNGARY
0 km
50
100
150
Teplice
Žatec
Podbořany
Ruzyně IAP
Praha
(Prague)
Kbely AB
Mladá
Boleslav
Strašice
Plzeň
(Pilsen)
Kutná Hora
Pardubice
Brno (ZF VAAZ)
Dědice
Horka nad
Moravou
Olomouc
Šternberk
Přerov AB
Kroměříž
Gottwaldov
Kunovice
Novy Jicin
Žilina
Martin
Vrútky
Dolná Mičiná
Sliač AB
Košice
Nitra
Bratislava
Gyor
Wien
(Vienna)
Budapest

(Map by Tom Cooper)

and commander of the airborne battalion, Captain Nadir Mohanna, also took part in practice jumps. In total, the Syrians accomplished 315 jumps during 29 flights of Il-14T aircraft and Mi-4 helicopters.

The training passed in a very friendly atmosphere, with Syrian officers, NCOs and privates trying hard to complete the course successfully. However, the number of participants – 17 – was excessively high for only one Czechoslovak instructor. Many of them had a lower level of experience than stipulated in the contract. The jumps were undertaken under difficult conditions because of no meteorological support and inadequate radio communication. Major Bílek provided several recommendations for improvement of the combat capability and training safety of the Syrian airborne units (such as increasing the amount of parachute equipment so that each paratrooper has his own set consisting of an OVP-450B, ZVP-300 and KAP-3; that the unit should have its own repair shop so it could have the same repair capability of parachutes as the production plant; the establishment of a support meteorological team; and that every conscript should perform at least 20 jumps during his obligatory service, while sergeants and officers completed at least 30 jumps and instructors minimally 35 jumps in a year).

Course 674 was carried out to the great satisfaction of the Syrian authorities. Both Czechoslovak officers returned home on 9 June 1966, although for Miroslav Bílek this was not to be his last visit to Syria; he would return there again three years later.[83]

FEEDBACK

While the state of military cooperation between Prague and Damascus was stable in the mid-1960s, the same could not be said about the Syrian political landscape. Tensions created by the power struggle between the Arab Socialist Ba'ath Party's old guard and the younger factions led to a *coup d'état* between 21 and 23 February 1966. The ruling National Command of the Arab Socialist Ba'ath Party was removed from power by a union of the party's Military Committee and the Regional Command. Political events were accompanied by violent clashes in Aleppo, Damascus, Deir ez-Zor and Latakia. The new government – under the leadership of Salah Jadid, Chief of the General Staff of the Syrian Arab Armed Forces – aligned Syria with the Soviet Bloc and pursued hardline policies towards Israel and 'reactionary' Arab states such as Saudi Arabia. These developments were more than welcome to the Presidium ÚV KSČ. However, what top-level Czechoslovak communist politicians did not anticipate were the outcomes of Jadid's domestic policies. He attempted a socialist transformation of Syrian society at a forced pace, creating only unrest and economic difficulties which seriously complicated the Syrian ability to pay Prague for weapons and military assistance.

The successful conclusion of Course 231 (training of 40 military technicians at the ZF VAAZ) and Course 247 (training of 18 pilots on L-29 Delfins) in Czechoslovakia in April 1966 led to an official invitation of a Czechoslovak high-ranking military delegation on behalf of General Ahmad Suedani, the new Chief of the General Staff of the Syrian Arab Armed Forces.

The visit took place between 18 and 26 November 1966. The Czechoslovak delegation, led by the First Deputy Chief of the General Staff of the Czechoslovak People's Army, Lieutenant General Ladislav Kolovratník, comprised a further eight senior officers who were responsible for the coordination of military assistance or training of foreign soldiers in Czechoslovakia and abroad. They included Colonel Jaroslav Foršt (Chief of the Technical Assistance Department at the General Staff), Colonel Bedřich Chrastil (Chief of the ZF VAAZ) and Lieutenant Colonel Bohumil Dostalík (commander of the 4th Aviation Training Regiment). The Czechoslovak delegation observed that after the last coup, the new Ba'ath leadership established political indoctrination of Syrian armed forces officers and NCOs. Syrian officers who attended military studies in the Soviet Union were promoted into important positions within the Syrian armed forces hierarchy. At the same time, a large influx of Soviet advisors into Syrian military units and schools began. Syria's leadership started a propaganda campaign to prepare Syrian society for a future war with Israel. During the discussions with officers from the Czechoslovak General Staff, the Syrians claimed that war with Israel was inevitable and it was necessary to expect that it would take place in the very near future. Despite these claims, Czechoslovak officers visited the border region around Lake Tiberias, where they could see no Syrian preparations for such an event.[84]

The delegation visited several Syrian military installations, largely related to the training of fresh troops. The first on the list was a military academy in Damascus on 19 November. Czechoslovak officers visited two courses (for intelligence officers and chemical specialists) led by Soviet instructors. According to their observation, "the Soviet methods of training could be clearly seen". At the same time, Syrian efforts for the maximum shortening of training and gaining only the most basic knowledge was apparent. During the next day, infantry, engineer and artillery training schools, situated in former French military camps at Qatana near Damascus, were shown to the delegation. These facilities provided training for future platoon and company commanders and NCOs, and organised specialised technical courses. Soviet advisors were present at the infantry training school; among the three schools, it was the only one that provided political education. Training equipment and teaching aids were generally very obsolete, while tactical training was considered simplistic by the Czechoslovak officers.

Another military educational institution visited by the delegation was the Homs Military Academy, which prepared officers for the Syrian Arab Army. It was evaluated as a well-equipped institution that placed great emphasis on the physical fitness and political education of the trainees. Again, the combat training was considered as formal, "with little real complex combat activity". According to the Czechoslovak officers, the technical training – how to operate the weapons properly – also seemed to be neglected.[85]

Apparently, the most interesting part of the tour for the Czechoslovak delegation was the visit to the Air Force Academy at Nayrab that used L-29 Delfins. Here, the two-year training of Syrian pilots was carried out without foreign advisors. The number of flight hours for the preparation of each student pilot were on average the same as in the Czechoslovak Air Force. Syrian instructor pilots flew around 250 flight hours a year, which was also similar to the practice in Czechoslovakia. The first new Syrian Arab Air Force cadets trained completely at Nayrab on L-29s were ready to accomplish their training in December 1966. They spent 40 flight hours in Chipmunks and a further 140 hours in Delfins. However, teaching aids at Nayrab were obsolete, some teaching panels and components of British origin looking like they were "from a museum". Schoolrooms for L-29s were not yet established, despite teaching aids having already been delivered from Czechoslovakia. Poor planning of flying activity and theoretical training in the Air Force Academy at Nayrab was obvious. Moreover, Czechoslovak officers observed poorly equipped aircraft workshops at Nayrab Air Base, coupled with the low work culture of local Syrian technicians. Maintenance of Syrian L-29s was considered insufficient, with a low level of periodic maintenance organisation. This meant that at the

During the military parade in Damascus in April 1966 on the occasion of the 20th anniversary of the Evacuation Day, the Syrian Arab Army displayed its frogmen along with large rubber boats equipped with MV 16k outboard motors, both of which were delivered from Czechoslovakia in 1956 and 1957. The boats were transported on the Praga V3S trucks which were obtained at the same time frame. (via Martin Smisek)

time of the visit, almost half of the aircraft were not in airworthy condition. A better situation prevailed at the 7th Aviation Brigade deployed at Mezze Air Base. The resident workshop was able to carry out all periodic maintenance work on resident MiG-17F fighters and MiG-15UTI trainers. Still, the work culture of local technicians was considered low.

The Czechoslovak officers were highly interested in the service of Syrian soldiers who underwent military training in Czechoslovakia. In the case of Syrian pilots trained under Course 247, it was clearly confirmed that their training on Delfins served as very good preparation for their subsequent conversion to MiG-17Fs. In comparison to other Syrian pilots, personnel trained by the Czechoslovak Air Force achieved excellent results. The methodology and demanding character of the Czechoslovak Air Force training exceeded the level of training of Syrian Arab Air Force pilots, both in their homeland and other foreign countries. According to standard practice, graduates from Course 247 trained on MiG-17Fs were supposed to carry out 50 circuit patterns with an instructor. In fact, they needed only between eight and 10 circuits in order to become proficient. This situation caused great amazement to the Syrian Arab Air Force leadership. Until that time, nothing like that had happened before. Syrian pilots with the 7th Aviation Brigade trained by Czechoslovak instructors had, after 1,000 flying hours on MiG-17Fs, only one accident (a rebound landing), while those trained only in Syria or other foreign countries had reportedly suffered four fatal aircraft accidents. Moreover, Syrian pilots trained by Czechoslovak instructors were prepared for operations in IFR conditions and were the only ones in the Syrian Arab Air Force able to fly under such conditions.

On 25 November, the Czechoslovak delegation met the Soviet military attaché to Syria, Colonel Maratsanov, the chief Soviet advisor to Syria, together with two other Soviet military advisors. According to Soviet opinion, the combat readiness of the Syrian Arab Air Force was very good, although its leadership was poor. Although Syria was armed with reasonably modern equipment such as MiG-21 fighters or T-55 tanks, Czechoslovak officers thought that Syrian military officials overestimated the combat capability and readiness of their armed forces. Moreover, they were struck by the almost caste system existing between Syrian officers, NCOs and enlisted personnel. There was a visible contrast between officers with an education attained at universities abroad and those who were promoted from the ranks of NCOs. Enlisted personnel were largely illiterate.

At that time, most of the arms and military assistance to Syria was provided by the Soviet Union and Czechoslovakia, with a small part contributed by Bulgaria.[86]

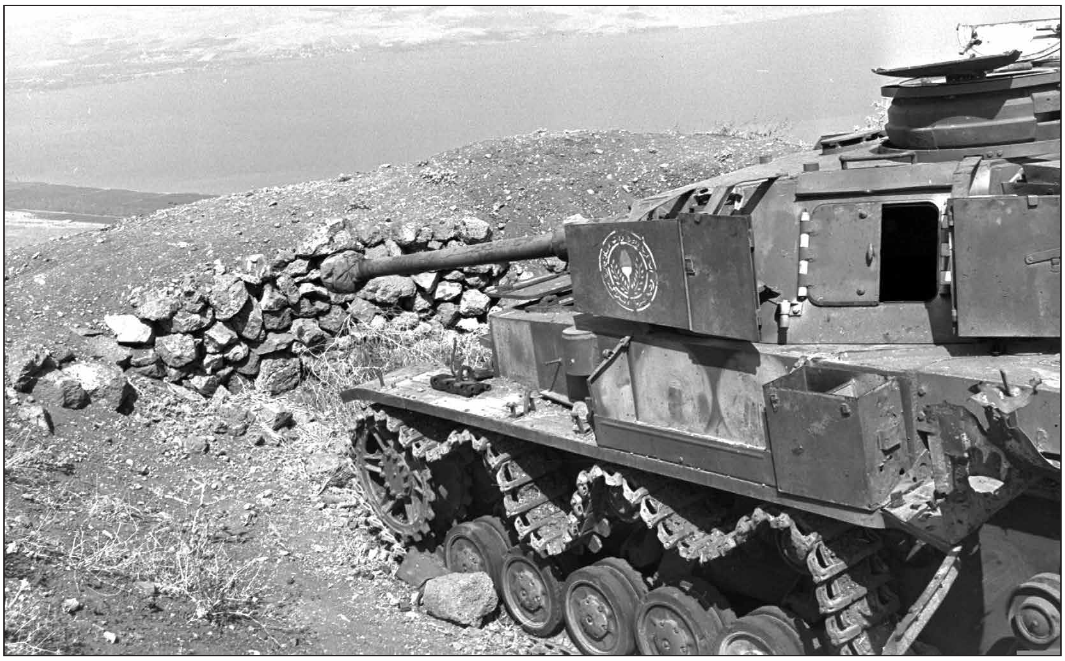
SECOND-HAND RADARS

With the help of General Dakkar, the HTS managed to win a further contract for the supply of armament for Syria in 1966. Contract No. 21-6-134 stipulated delivery of materiel for air defence troops worth 4.5 million CSK (see Table 12). All items were retired from the inventory of the Czechoslovak People's Army as surplus.

Table 12: Military hardware delivered in the frame of Contract No. 21-6-134[87]

Number of examples	Year of delivery	Type	Note
6	1966	SON-9A, fire control radar	including associated APG-15 power-generating sets
6	1966	Tatra 111, heavy truck	tractors for SON-9A radars
13	1966	PUAZO-4a, fire control director	
8	1966	DJA-6, anti-aircraft rangefinder	

The hardware was followed by a Czechoslovak military team led by Lieutenant Colonel Miroslav Rozínek and composed of Major



Czechoslovakia delivered 45 PzKpfw IV tanks to Syria in 1955. They ended their career in the reservist units of the Syrian Arab Army deployed along the Golan Heights, such as the pictured example which was knocked out on the Hirbet Batin position above the Ha'on kibbutz on the Sea of Galilee during the Six-Day War. (Moshe Milner, Government Press Office)

Jiří Dokoupil (from the ZF VAAZ), Major Zdeněk Němec and Radimír Rychtár (both from the Military Repair Plant Horka nad Moravou; *Vojenský opravárenský závod Horka nad Moravou*). Their task was to carry out the handover of radars, with functional checks and training of Syrian radar technicians. The Czechoslovaks arrived in Damascus on 2 April 1967 and reached Hama during the next day. Five radars were handed over there, while the remaining example was turned over in the Syrian capital. All radars functioned without any problems. Thereafter, the training of local technicians was commenced. Czechoslovak officers observed a relatively low level of technical knowledge among their Syrian trainees. The lectures were provided in an eclectic mix of Czech, Russian, English and Arabic. Upon the request of Syrian officials, Major Němec performed minor repairs of local SON-9A radars and APG-15 generators. While Czechoslovak officers returned home on 24 and 26 April, Radimír Rychtár continued with the training of Syrian officers until 10 May.[88]

Rychtár returned to Syria the next year to carry out training in maintenance of SON-9A radars under the cover name Course 692. He departed for the Middle East on 3 March 1968.[89]

VISIT BEFORE THE CATASTROPHE

Between 26 and 28 January 1967, a group of nine Syrian officers, teachers and instructors of the Air Force Academy at Nayrab, led by Colonel Abdul Ghani Zoghbi, visited Antonín Zápotocký Military Academy at Brno in order to acquaint themselves with equipment and teaching aids that were used for the education and training of future junior technical officers of the Czechoslovak Air Force. Some of the Syrians were graduates of the MTC at Cairo, and thus they could meet their former Czechoslovak teachers from the time of their studies in Egypt. As a gift, the Syrians received 17 different titles of university textbooks originally prepared for the MTC and related to aircraft engines and electrical systems.[90]

In a letter on 23 February 1967, Syrian Minister of Defence Hafez al-Assad invited a Czechoslovak top-level military delegation for an official visit to Syria. The Ministry of National Defence accepted the offer, and a group led by the Minister of National Defence, Army General Bohumír Lomský, subsequently arrived in Damascus on 10 May, at a time when tensions in the Middle East were reaching boiling point. During a week-long stay, the Czechoslovak minister and generals held discussions with Hafez al-Assad, Chief of the Army General Staff General Ahmad Sweidani and Prime Minister Yusuf Zuayyin. While the Syrian officials deeply appreciated Czechoslovak military assistance, at the same time, they complained bitterly at the established practice that all arms and training was provided strictly on a commercial basis. The Syrians stressed their free of charge help for national liberation movements in several Arab countries. According to them, this was one of the reasons that 56 percent of the annual state budget was spent on the Syrian military. Members of the Czechoslovak delegation could see for themselves the veracity of such statements at Homs Military Academy, where the training of officers from Eritrea, Somalia, Aden and Morocco was undertaken. However, this changed basically nothing in the Czechoslovak commercial attitude towards providing military assistance for Syria. Czechoslovak officers also had the opportunity to visit the border region with Israel. The Syrians accepted with great appreciation an invitation for Hafez al-Assad to make a return official visit of Czechoslovakia.[91]

The military delegation returned to Czechoslovakia on 17 May with the impression that the political and military leadership in Damascus was living a daydream if they believed they had the ability to easily destroy Israel. Indeed, the command and control system of the Syrian armed forces and their combat preparedness were seen as being far from ready to accomplish such a task. The Czechoslovak findings were shown to be correct only three weeks later when the Six-Day War broke out and Syria lost the Golan Heights to a rapid Israeli offensive. Thus, Hafez al-Assad arrived in Czechoslovakia under very different circumstances than originally planned.[92]

5

LICKING WOUNDS

Although high-ranking officers of the Czechoslovak People's Army had apparently few illusions about the true combat capability of the Syrian Arab Armed Forces, the scope of the Arab defeat during the Six-Day War was still stunning, not only for the officers but for the communist leadership in Prague. Moreover, the internal situation in Syria after the ceasefire was becoming tense. Afraid that a coup could be underway, the Arab Socialist Ba'ath Party leadership redeployed loyal units of the 70th and 72nd Armoured Brigade around Damascus to stabilise its political position. The excitement was eventually calmed down thanks to military measures and the deportation of several unwanted politicians to Lebanon.

Table 13: Czechoslovak emergency delivery of military hardware to Syria immediately after the Six-Day War[2]

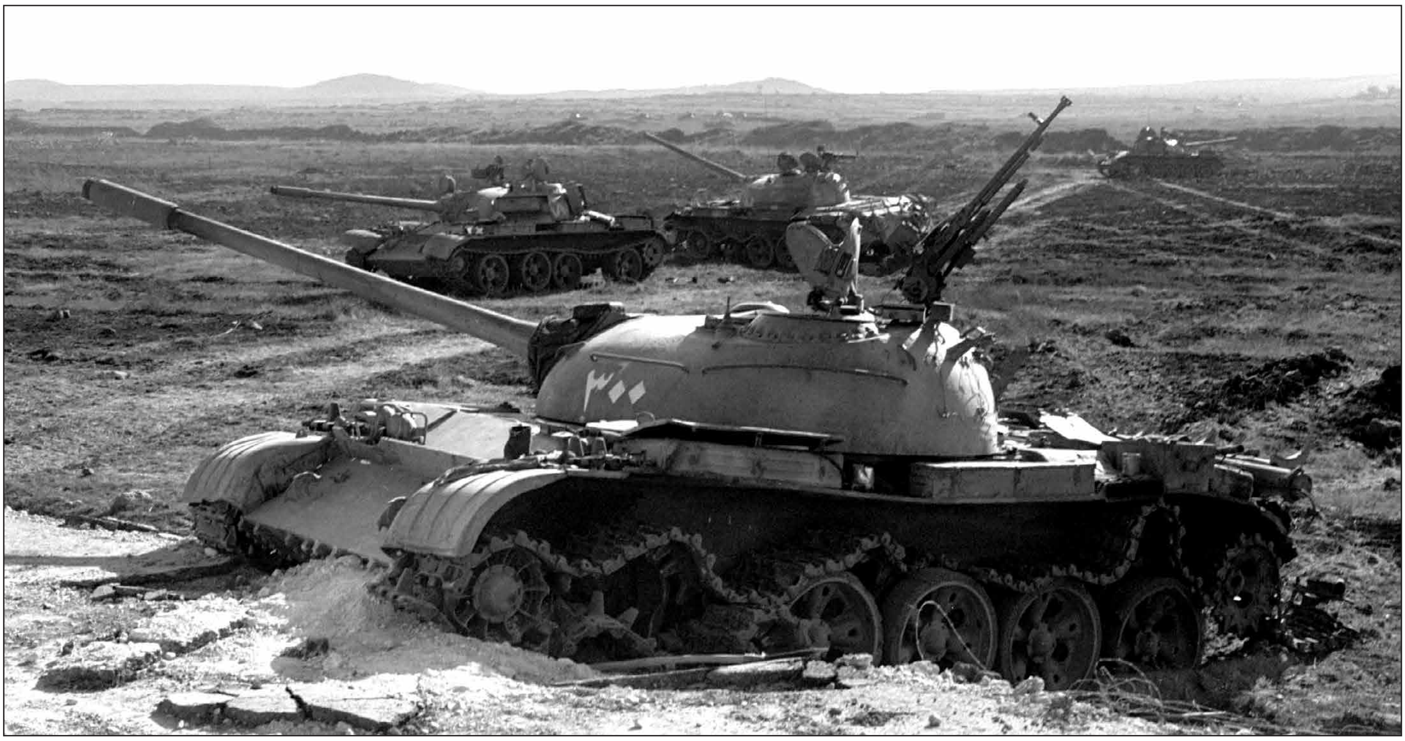
Type	Number of examples	Note
Sa 23 and Sa 25, 9mm submachine gun	150	dispatched on 6 August 1967
vz. 52, 7.62mm rifle	150	dispatched on 6 August 1967
vz. 48, 9mm round	2,000,000	dispatched on 6 August 1967
vz. 52, 7.62mm round	500,000	dispatched on 6 August 1967
vz. 52, 85mm anti-tank gun	24	dispatched on 27 August 1967
85-JO-TK 44, K 52, PLK 39, 85mm fragmentation round	8,000	dispatched on 27 August 1967
85-JPSv-TK 44, K 52, PLK 39, 85mm armour-piercing round	6,000	dispatched on 27 August 1967
Medical set for battalion medical aid station	1	dispatched on 6 August 1967

Czechoslovakia reacted to the Syrian military defeat on 20 June 1967 when the Presidium ÚV KSČ approved an emergency supply of armament for one anti-tank battalion worth 21,087,000 CSK. The weapons were provided as a gift in two deliveries. The first one was dispatched on 6 August and arrived at the Syrian port of Latakia on 2 September. The second shipment was sent on 27 August. Delivered arms and ammunition are listed in Table 13. Similar assistance was also provided at this time for Egypt.

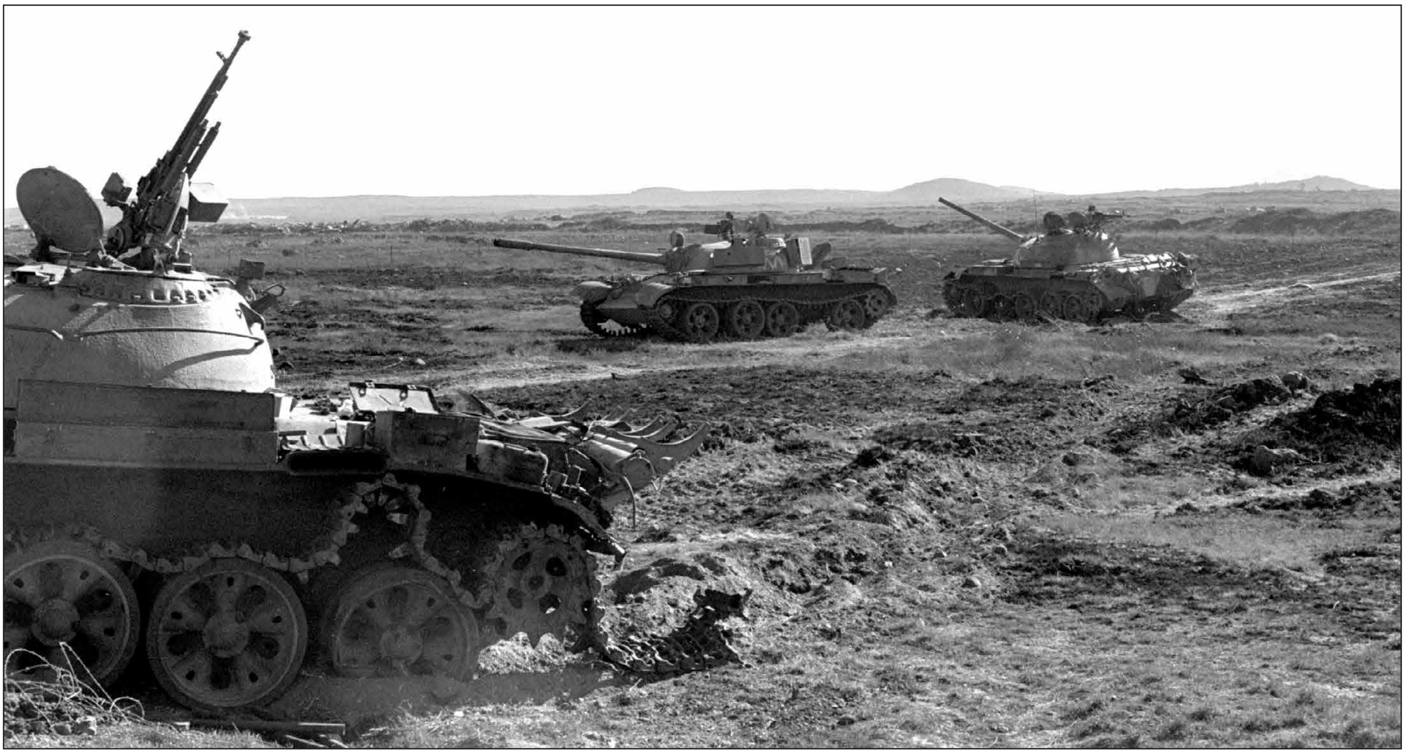
Other communist countries came to the rescue too. The most generous was the USSR, which provided 200 T-34/85 tanks, 40 MiG-17 fighters and 20 MiG-21 fighters. Deliveries of MiGs were supplemented by Su-7 fighter-bombers, which were supplied in the frame of a contract awarded before the war. Hungary, meanwhile, donated 36 antiquated ZiS-3 divisional guns to equip one anti-tank battalion. While these supplies numerically compensated for some of the losses suffered by Syria, most of the delivered arms could hardly be described as modern.[1]

According to a Czechoslovak intelligence assessment from September 1967, the combat morale of the Syrian Arab Armed Forces at the time was low. Soldiers were afraid and dissatisfied, one of the reasons being the reduction of their pay. The general level of combat readiness was also still considered very low. Some of the military materiel recently delivered from the Soviet Union and other communist countries was still stored in warehouses and not deployed to combat units. Moreover, it was discovered that Syrian citizens were selling their personal weapons from the times of the Six-Day War – pistols, submachine guns and machine guns of Czechoslovak and Soviet origin – for very low prices in Lebanon.[3]

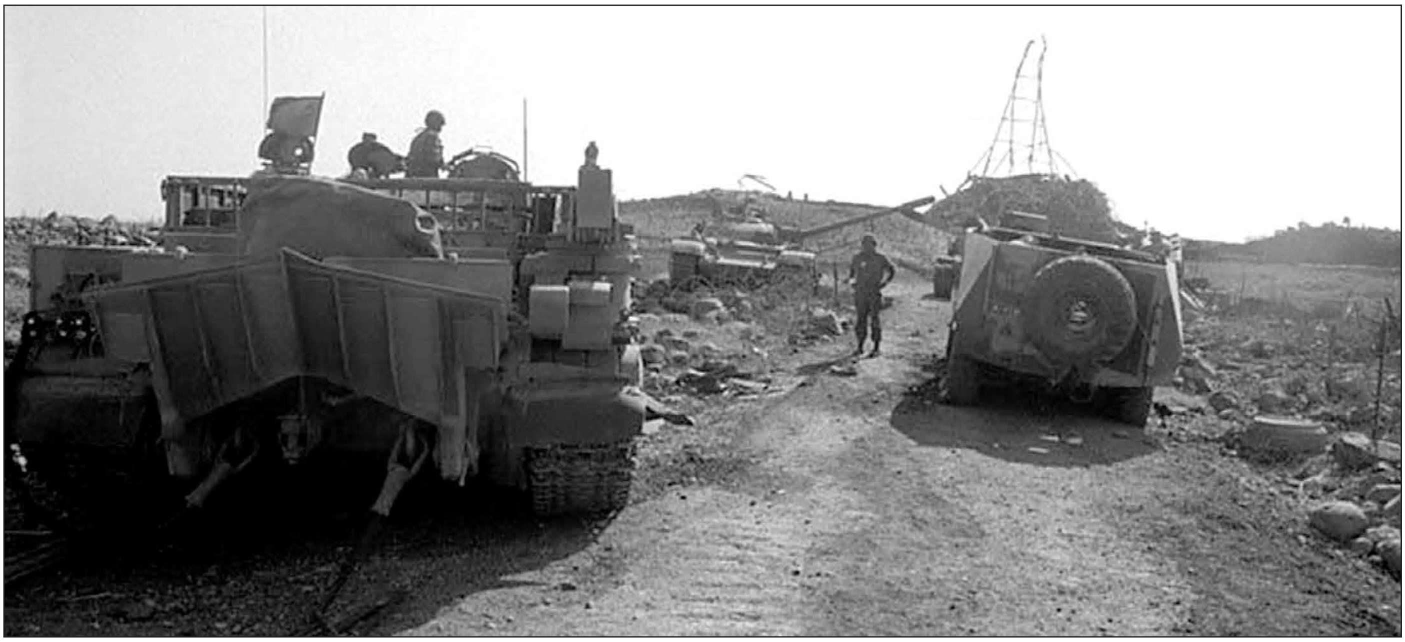
The planned visit of Syrian Minister of Defence Hafez al-Assad and his delegation of top-ranking officers to Czechoslovakia took place between 9 and 16 October 1967. The Syrians had the opportunity to visit not only Czechoslovak military units and installations – the VAAZ at Brno, 11th Fighter Aviation Regiment (*11. stíhací letecký pluk*) at Žatec and 13th Tank Division (*13. tanková divize*) at Mladá – but local factories (the Let Kunovice aircraft plant or AZNP Mladá Boleslav automobile manufacturer) and agricultural facilities (state farm at Vracov). On the one hand, this sightseeing tour served to demonstrate alleged communist achievements, but its primary purpose was to practically show the latest Czechoslovak arms (training aircraft, tanks, APCs, engineering equipment and



In 1970, the Syrian Arab Army obtained 154 T-54AR and six T-54ARK tanks retired from the stocks of the Czechoslovak People's Army. Many of them were knocked out by Israeli forces on the Golan Heights during the October 1973 Arab-Israeli War, such as the example in this photograph – wearing the turret number 300, indicating it was assigned to a company commander. (Menashe Azouri, Government Press Office)



Another photograph showing Syrian tanks knocked out on the Golan Heights during the October 1973 Arab-Israeli War, including a Czechoslovak-made T-54AR (left), T-55 (centre) and Soviet-made T-54. Before the outbreak of the fighting, Czechoslovakia delivered more than 220 T-55 medium tanks to Syria. (Menashe Azouri, Government Press Office)



VT-55 (foreground, left), BTR-152 (centre, right), and T-54A (background) of the Syrian Arab Army seen outside the IDF headquarters at Naffech, on the Israeli-occupied Golan Heights, after the October 1973 Arab-Israeli War. (via Martin Smisek)

trucks) that the HTS was eager to sell to Syria. Hafez al-Assad took advantage of the opportunity to undergo a complex medical check-up in the Central Military Hospital in Prague, where his medical examination was carried out by the best Czechoslovak doctors.

A great deal of attention was paid to the acquisition of new trucks. Before the Six-Day War, Syrian armed forces had already confiscated some 1,500 trucks from the civilian sector. However, the Israeli Air Force managed to destroy most of them during the fighting. When the conflict ended, the Syrians had lost a total of around 3,000 vehicles. Most of the trucks delivered by Czechoslovakia to Syria before the war were wrecked. During negotiations on 16 October 1967, Syrian military representatives and officials of the Motokov foreign trade company reached an agreement for the delivery of 350 Tatra 138 trucks (300 cargo bed vehicles and 50 tippers). The Syrians estimated their overall need at roughly £5 million of military materiel. Their Czechoslovak counterparts informed them they could use already-provided Czechoslovak credit worth £1.4 million, which could be increased by another £1 million. Hafez al-Assad again complained about the high prices for the offered weapons, that were reportedly two to three times higher than their Soviet equivalents. Czechoslovak officials replied that it was not possible to provide the 33 percent price reductions that were the standard practice for Moscow.[4]

Table 14: Contract No. 31-9-10[9]

Type	Number of examples	Unit price	Note
T-54AR, medium tank	154	£26,500	tanks after the first general overhaul, with DShK anti-aircraft machine gun
T-54ARK, command tank	6	£27,430	tanks after the first general overhaul, with DShK anti-aircraft machine gun
spare parts for T-54AR and T-54ARK tanks	-	-	worth £424,558

Syrian officers informed leading generals of the Czechoslovak People's Army about combat operations of the Syrian Arab Armed Forces during the Six-Day War. During discussions between al-Assad and Minister of National Defence Army General Lomský, the topic of the Israeli nuclear programme was on the agenda. According to Syrian intelligence, Israel was conducting nuclear research with the assistance of West Germany and its national nuclear research centre at Karlsruhe (*Kernforschungszentrum Karlsruhe*). Syria supposed that the outcome of the joint development was to be subsequently tested directly in Israel, in the vicinity of Beersheba, which was indeed the general location of the Negev Nuclear Research Centre. Hafez al-Assad dispatched a long-range reconnaissance team with orders to find out more details about the Israeli research facility. However, the Syrian military unit was discovered by Israeli security forces and almost completely wiped out without discovering any useful information.[5]

The only Czechoslovak military materiel supplied to Syria during 1968 was the delivery of 20,000 combat helmets for the infantry. Following protracted negotiations, on 25 January 1969, Syrian Deputy Minister of Defence General Louis Dakkar and the boss of the HTS, František Langer, signed an agreement for the delivery of Czechoslovak military hardware worth £1.2 million (77 million CSK) on 3 percent credit, to be paid between 1970 and 1976. The Syrians expressed an interest in the acquisition of 150 T-54A tanks and up to 400 vz. 53 anti-aircraft guns from the stocks of the Czechoslovak People's Army. Although the Syrian Ministry of Defence offered interesting conditions of payment for vz. 53s, Czechoslovak military officials refused to sell these obsolete weapons because of their low numbers in the army inventory. In the end, the agreement from 25 January 1969 served only as a basis for contracts for the delivery of spare parts, gas masks, parachutes and 12 retired SON-9A fire control radars that were supplied during 1969. A further 100 Sa 26 submachine guns were supplied in the same year.[6]

RETIRED TANKS FOR THE SYRIAN ARAB ARMY

However, a different situation developed in the case of the tanks. The T-54A was becoming obsolete, and the Syrian demand presented an opportunity to sell off some of them. Czechoslovak tank production and repair plants were in the costly process of upgrading them to T-54M standard, but another option was to get rid of the old T-54A tanks and use the money obtained to buy brand-new T-55A vehicles. Moreover, according to HTS officials, this was the last chance for the export of T-54As to a foreign customer. Consequently, the Czechoslovak Federal Ministry of National Defence[7] accepted the scheme, despite some initial reluctance. During the spring of 1969, the chief of Syrian tank forces, General Ramadan Taher, personally carried out a random check of the offered tanks and was satisfied with their technical condition. Following further negotiations, both sides signed Contract No. 31-9-10, worth £4,670,138, for the supply of 160 T-54AR and T-54ARK tanks on 2 July 1969. Deliveries within the frame of this deal are listed in Table 14. To enable the Syrians to finance the contract, the Czechoslovak HTS and the Syrian Ministry of Defence made a credit agreement for supplies of tanks and related equipment to Syria on 27 June 1969. A supplement to this agreement was signed in Damascus on 1 October that year, bringing the total value to £8 million (512 million CSK) that the Syrians spent mostly on the acquisition of the already mentioned 160 T-54AR and T-54ARK tanks, plus 100 T-34/85 tanks and 15 L-29 Delfin training aircraft.[8]

T-54AR and T-54ARK tanks for Syria were withdrawn from the inventory of the 20th Training Tank Battalion (*20. školní tankový prapor*) at Podbořany, the 5th Training Tank Battalion (*5. školní tankový prapor*) at Žatec and the 1st Tank Regiment (*1. tankový pluk*) at Strašice. The vehicles were transferred to their original manufacturer, Turčianské strojárne at Martin, which performed a general overhaul of tanks not previously overhauled or a major revision of tanks after their first general overhaul. The Syrian Ministry of Defence dispatched an acceptance commission to Czechoslovakia for taking delivery of the tanks. However, the seven Syrian officials started to cause problems as soon as they arrived at Martin. Contrary to the terms of the contract, or in situations when the conditions were not clearly specified, they demanded the tanks almost be of the quality of newly built vehicles.

Turčianské strojárne tried reluctantly to comply with the Syrian wishes. Thus, up to 15 February 1970, almost all the tanks' radios had to be additionally repaired. At the same time, 90 pairs of drive wheels, 391 road wheels and 28 main guns were replaced with new ones, even though the original examples were in a suitable condition. Some of the Syrian demands were complete nonsense, such as a requirement that RNA fuel pumps were "good only when the fuel gushes 2 metres (7ft) over the hull" or that vacuum tubes in R-113 radios should not be more than three years old. These demands not only generated tensions between Czechoslovak factory officials and the Syrian officers but led to significant delays in the delivery of the tanks. Up to the end of 1969, only 57 vehicles were dispatched to Syria. According to the terms of the original contract, deliveries were to be concluded by 31 March 1970, but the last T-54AR tank was not sent to Syria until 27 June.[10]

These events were repeated in the case of parallel deliveries of T-34/85s retired from the inventory of the Czechoslovak People's Army. Contract No. 31-9-24 from 30 August 1969 stipulated delivery of 100 refurbished tanks to Syria before the end of the year. The Syrians paid a very low price for them – only £4,800 per vehicle, including costs for transportation that reached almost one-quarter of this sum. The overhauls started at the 2nd Tank Base (*2. tanková základna*) at Kroměříž during September and continued there until 9 November. By this time, Syrian officials had accepted only 10 vehicles. Exaggerated Syrian demands, coupled with the poor technical condition of the tanks, led to a decision to overhaul the rest of the T-34/85s directly in Repair Plant 025 (*Opravárenský závod 025*) at Nový Jičín. Initially, a random check was carried out to assess the true technical state of the offered tanks. Unfortunately for the Federal Ministry of National Defence, selected vehicles were in much better condition than the rest of the T-34/85s destined for Syria. Thus, the overhauls required a better-equipped tank repair facility and more time, which caused further delays. Some Czechoslovak officers suspected the Syrians were trying to complicate the acceptance of the tanks merely to lengthen their stay in Czechoslovakia as much as possible. The Syrian military authorities came to the same conclusion and started to threaten members of the acceptance commission with a court-martial if they unnecessarily extended their stay at Martin and Nový Jičín. According to the original plan, overhauls of T-34/85s were to be finished by the end of 1969, but the deliveries to Syria only commenced in 1970 and the last tank was refurbished and taken over by Syrian representatives at Repair Plant 025 in late May of the same year. After being accepted, half of the T-34/85 tanks were transported to ports in Poland and subsequently shipped to Syria. The remaining vehicles were delivered through the Yugoslav port of Rijeka in March and June 1970.[11]

BACK IN DAMASCUS

In 1965 and 1966, Miroslav Bílek trained two classes of Syrian paratroopers under the Czechoslovak code names Course 668 and Course 674. Then, under the cover name Course 723, he returned to the Syrian capital as a technical expert for a practical demonstration of new Czechoslovak parachutes and related equipment in 1969. Newly promoted to the rank of lieutenant colonel, Bílek arrived at Damascus International Airport on Tuesday, 20 March. After an introductory meeting with the Syrian general staff, he provided instruction on the OVP-65P combat parachute and PTCH-7 sport parachute during the Friday and Saturday. After a pause on Monday, the presentation continued on 25 March with actual jumps. A practical demonstration was planned for the following day, but the session was cancelled due to a combat alert.

Lieutenant Colonel Bílek experienced problems during the presentation of the KAP-3P automatic opening device. Although brand-new and with a warranty card, the example in question failed to function due to poor manufacturing quality caused by the negligence of the maker's workers. Bílek had to use all of his skills to persuade the Syrians that some mistake had apparently happened and presented the KAP-3P as actually a retired example that was only used as a dummy. Fortunately for Czechoslovak interests, his efforts proved successful because the Syrians expressed an interest in purchasing up to 350 OVP-65P parachutes which, according to their assessment, had extraordinary qualities.[12]

The Czechoslovak People's Army carried on providing further maintenance training of SON-9A fire control radars. Classified as Course 749, one Czechoslovak advisor was dispatched to Syria to instruct Syrian technicians. The training was to take place from 1 December 1969 to 31 December 1970. An additional 12 SON-9A radars retired from the stocks of the Czechoslovak People's Army were repaired in the Military Repair Plant Horka nad Moravou and dispatched (together with associated APG-15M power-generating sets) to Syria in 1970.[13]

FURTHER DELFINS AND TRAINING FOR THE SYRIAN ARAB AIR FORCE

After more than two years of negotiations, officials from the HTS were able to sign Supplement 8 of General Contract No. 20-13-212 in Damascus on 10 February 1968. In its frame, the Ministry of National Defence was obliged to carry out training in general overhauls of the L-29 Delfin for 34 selected Syrian repair technologists and aircraft technicians. The aim of the training was to provide the Syrians with such knowledge and experience that, after graduating from the course, they would be able to perform a complete overhaul of the aircraft and its subsystems independently. In the end, the Syrian Arab Air Force sent only 32 technicians to Czechoslovakia. The training received the cover name Course 261 and, after two months in the training centre at Zvolen, its practical stage took place at the Aircraft Repair Plant Kbely. This started on 15 August 1968 and was to last until 15 April 1969. One of the Syrian technicians was badly injured on 11 April 1969. Assad Ali Musa was crossing a street when walking near Kbely Air Base and failed to see a passing civilian car that ran him down. He received medical treatment at Bulovka hospital in Prague, where he remained until 30 May.[14]

Between 1964 and 1966, the Syrian Arab Air Force received 30 brand-new L-29 Delfin training aircraft. All of them survived the Six-Day War (Syrian L-29s were not engaged in the fighting), and the Syrians subsequently decided to expand their service with the acquisition of further airframes. Thirteen more Delfins were delivered to Syria in July 1968. During the late 1960s, the Syrian Arab Air Force leadership considered sending some 50 cadets to Czechoslovakia for training on L-29 trainers. However, during the summer of 1969 they changed their mind and opted to buy additional Delfins instead.

Thus, a further batch of 15 aircraft was financed through a supplement to the credit agreement from 27 June 1969. Their delivery started the same year. This time, the aircraft were assembled in Czechoslovakia and flown to Syria by Czechoslovak factory pilots from Let Kunovice and military instructor pilots from the Higher Aviation Training School. The overflights started on 27 November 1969 and continued until 19 January 1970. Three missions were each composed of one four-ship formation. For the remaining flight, three Delfins were simultaneously overflown to Nayrab. Three factory pilots (Srnec, Svinka and Vlk) served as flight leaders during each 2,950km (1,647-mile) overflight along the route Vodochody–Bratislava–Budapest–Belgrade–Sofia–Istanbul–Ankara–Nayrab. The following Czechoslovak Air Force instructors – all lieutenant colonels – took part in the operation: Jaroslav Vrba (three overflights), Ondrej Chromjak, Jaroslav Janoušek, Ladislav Kos (two overflights each), Stanislav Filip and Oldřich Valehrach (one overflight each). Each formation was accompanied by a factory technician seated in the back cockpit of one of the aircraft. Despite unfavourable weather conditions, all the flights were accomplished successfully.

In November 1970, the Czechoslovak government approved the signing of another credit agreement worth £15 million (850 million CSK) that enabled Syria to buy further military hardware, including 20 L-29s that were delivered between January and March 1971.[15]

Deliveries of Delfins were complemented by additional technical and military assistance. Under Contract No. 4380020, Czechoslovakia supplied repair equipment for general overhauls of L-29s in an aviation workshop at Nayrab Air Base in 1969. Hardware was followed in September of the same year by a small advisory team of two officers (commander/technical officer František Dvořák and interpreter Jaroslav Nedvěd) who were, during the first two weeks of their stay, assisted by Josef Procházka from the Aircraft Repair Plant Kbely. Dvořák and Nedvěd served at Nayrab under the cover name Course 681, which was apparently arranged in the frame of Contract No. 20-25-33. Their task included helping Syrians with the translation of repair manuals, additional training of the local young chief repair technologist and the checking of repair jigs delivered from Czechoslovakia (some jigs were manufactured directly in the workshop at Nayrab). A new hangar, specifically designated for general overhauls of Syrian Delfins, was to be constructed at Nayrab by the end of September 1970. When the building was completed and furnished with the required repair equipment, general overhauls of the Delfins were to be started under the guidance of further Czechoslovak advisors from the Aircraft Repair Plant Kbely. Course 681 was planned to continue until 1 April 1971.[16]

Up until 1975, Czechoslovakia delivered spare parts for general overhauls of a total of 70 L-29 Delfin training aircraft. Their repair at Nayrab were undertaken under the supervision of Czechoslovak specialists until the first half of 1974. After that, Syrian technicians became well enough qualified to perform the overhauls without Czechoslovak expertise.[17]

LESSONS IN AIR COMBAT

In summer 1969, a specific training session undertaken by Czechoslovak Air Force advisors started in Syria. Codenamed Course 740, it was the first time that Czechoslovak instructors provided tactical training for pilots of the Syrian Arab Air Force; in other words, they taught them how to fight. A team of six Czechoslovak officers arrived in Syria in August 1969. The advisory group was led by Lieutenant Colonel Václav Dvořák (commander of the 2nd Squadron of the 1st Fighter Aviation Regiment; *2. letka 1. stíhacího leteckého pluku*) and comprised pilots Zdeněk Brych and Jaromír Šulcer, theory teachers Luboš Večeřílek and Bohdan Táborský, as well as interpreter Petr Uruba. Lieutenant Colonel Dvořák later commented: "It was quite ironic that we, who had never had a taste of real air combat, were to improve Syrian pilots, many of whom experienced the Six-Day War and constant skirmishes with the Israelis, which were no exception even during our stay."

In the first two weeks of their mission, the Czechoslovak instructors were attached to the Air Training Department (ATD) led by Colonel Jasin at the headquarters of the Syrian Arab Air Force in Damascus. Here, they were tasked to prepare a training syllabus according to the requirements of resident officers. The basic scheme was to provide theoretical and practical training for five or six Syrian instructor pilots at air brigades operating MiG-17s, MiG-21s and Su-7s. The syllabus was constantly changed and supplemented with new topics and demands. Thus, the Czechoslovak advisors discovered that ATD officers had little clue what was actually going on with combat units of the Syrian Arab Air Force. For example, the Syrians demanded training in shooting at a towed target, but after some time they realised that the Syrian Arab Air Force had no target tugs. On another occasion, ATD officers requested training for radar-equipped MiG-17PF fighters, only to find out that no such aircraft were in the inventory of the Syrian Arab Air Force. However, this was not the end of the problems. When the syllabus was finally prepared, it transpired that the air brigades were not ready for Czechoslovak assistance and they had to hastily change their training programmes.

The main feature of the course was the fact that Syria wanted new tactical procedures, something different to what they knew from Soviet experience. The theory was taught in two parts: air combat tactics and readiness of ground-based command posts (ground-controlled interception posts), with 80 hours of planned lectures and 60 hours of air force operations against ground targets. In the end, only some 50 hours of each were usually taught by instructors Večeřílek and Táborský because Syrian pilots were already familiar with plenty of aspects of the subject matter. Czechoslovak interpreter Uruba translated the theoretical lectures into English, while an interpreter from the headquarters of the Syrian Arab Air Force or one of the trained pilots simultaneously transferred the speech into Arabic. Instructor pilots Šulcer, Dvořák and Brych had flight plans that put the theory into practice.

Actual training started in Mezze on 1 September 1969 with the local 7th Air Brigade equipped with MiG-17F fighters. The Czechoslovak course was received with great interest at the air base. All staff, including all squadron and flight commanders, took part. The theoretical lecture was translated personally by Colonel Naji Jamil, commander of the 7th Air Brigade. Initially, theory teaching was followed immediately by a practical flying session. However, this pattern only took place for a short time; because of various combat alerts, the programme was soon changed so that the theory was provided completely, with all flying activity organised by instructor pilot Šulcer following later. Šulcer's stay was prolonged upon Syrian request, and he subsequently assisted in the training of other pilots of the 7th Air Brigade.

Theory training at Mezze ended on 11 November 1969, restarting four days later at an air brigade operating Su-7BMK fighter-bombers at T4 air base. According to Major Večeřílek, the "unit's staff and mainly the base commander Major Azam (generally known as Baron) demonstrated hearty disinterest in the Czech group, which arises from his personal qualities – swellhead, lord of wide desert and surroundings." Poor organisational work at T4 and the escalating Israeli-Syrian War of Attrition meant that the theory phase of the Czechoslovak course lasted there until 31 December. Thereafter, it was the turn of instructor pilot Brych to provide flying experience. Fighter-bomber pilots were mostly interested in new, for them unknown matters such as defensive tactics against enemy fighters or special attack manoeuvres against ground targets.

Czechoslovak instructors of Course 740 seen in Damascus, from left: Dvořák, Večeřílek, Uruba, Brych and Táborský, autumn 1969. (Václav Dvořák via Miroslav Irra)

Upon the request of the Syrian Arab Air Force leadership, Major Večeřílek and instructor pilot Šulcer prepared air combat tactics for individual aircraft, pairs and whole flights, taking into account specific Syrian conditions and tactics employed by the Israeli Air Force. Večeřílek then carried out the training of operators at command posts of the Mezze and Dmeir air bases in special ground-controlled intercept procedures. He continued with his original job on 22 December, when he started theoretical lectures for selected instructors of the 3rd Air Brigade at Dmeir Air Base. Here, the course was well organised by local staff, so it could be concluded by 17 January 1970. As was the case at the two previous air bases, when the theoretical part was completed, Czechoslovak instructor pilot Lieutenant Colonel Dvořák started intensive flight training, which was interrupted only by growing combat activity. Czechoslovak theory instructors toured the air bases again between 24 and 28 January to perform commissioned tests of Syrian pilots. The flying activity of the Czechoslovak instructor pilots, primarily Šulcer and Dvořák, included the danger of sudden interception by Israeli Mirage IIICJs or Phantom IIs because of the Syrian radar network's inability to detect enemy aircraft in time and send a proper warning.

Dvořák later stated: "Our entire mission was evaluated highly positively by the Syrian air force leadership, [and] it was even said that we did more than was in the contract, for example, we developed a number of different training plans and methodological procedures for training and conducting air combat. Given the difficulties that accompanied the course, I think it was a success."

Course 740 was completed successfully and the Czechoslovak instructors returned home between 12 February and 12 April 1970.[18]

CZECHOSLOVAK ASSESSMENT OF THE SYRIAN ARAB AIR FORCE

On 1 January 1970, General Jamil Naji became the new Commander-in-Chief of the Syrian Arab Air Force, with General Helmi holding the post of Chief-of-Staff. A new post of inspector for each jet combat type was introduced at the same time. The first officers to assume this position were Colonels Hamdi (for the MiG-17), Hamoui (for the MiG-21) and Badawi (for the Su-7). After his appointment, General Naji started to replace top-ranking officers at air brigades with new ones having greater expertise, range of knowledge and desire to implement new features in the air force organisation and command structure.

Each air brigade had a training plan for the next year, but without a systematic approach. Training in night flying was insufficient, while training of combat squadrons and ground-based command posts was not in mutual harmony. Whereas preparatory briefings before each flight were unsatisfactory, subsequent debriefings were almost non-existent, no matter whether it was a training or combat mission. Squadron and flight commanders paid little attention to their pilots. Aircrews were not only properly familiarised with the technical and tactical capabilities of their aircraft, but with the combat tactics of the enemy too. Yet even though Israeli capabilities and tactics were sufficiently known, according to Major Večeřílek, "the greatest effort in the time between flights is spent on drinking tea and coffee and talking rubbish".

The air brigade at T4 with Su-7BMK fighter-bombers was considered the best-prepared jet combat unit (almost half of its pilots had undergone Czechoslovak training). Although the 7th Air Brigade with MiG-17Fs had experienced staff, a large number of its regular pilots were young and had little combat training. The 3rd Air Brigade at Dmeir conducted intensive training, but with only meagre results, suffering relatively extensive losses of both pilots and aircraft in combat with Israeli fighters. According to Major Večeřílek, "aircrews of this unit are even in Syria well-known for their arrogance and not so great skills". It took a great deal of Dvořák's work to persuade the staff of the 3rd Air Brigade that their concept of air combat tactics was completely flawed: "It was hard to convince them that chasing in turns in the vertical and horizontal plane at 8 g is pointless."

The command structure of Syrian fighter aviation was composed of a main ground-controlled interception post and ground-controlled interception posts of respective air brigades. Only two P-35 radars provided information for all three brigade posts. However, the deployment of radars was unsuitable because ground clutter hindered a good overview of the situation in Syrian airspace in general, and the approach directions of Israeli combat aircraft in particular. Večeřílek later said: "The way of fighter control is based on this fact, that lies mostly in sending fighters into the area of enemy air force activity and waiting on how many of them return to the home base." The personnel at the main ground-controlled interception post had little trust in the abilities of subordinate brigade command posts, which led to its effort to guide all airborne fighters. This created situations in which up to 20 fighter pilots were on one radio channel, thereby creating chaos that complicated the lives of flight commanders who were unable to lead their formations properly.

Večeřílek provided the following concluding assessment: "The main traits of character of Syrian Arab Air Force members are boastfulness and arrogance on the one hand, but the inability of logical consideration and creative developing of gained knowledge, conditioned also by reluctance, on the other hand."[19]

DELFIN INSTRUCTORS AT NAYRAB AND KWERES

Deliveries of new L-29 training aircraft to Syria were followed by an influx of Czechoslovak instructor pilots from the Higher Aviation Training School at Košice. Their task was to train new Syrian pilots at the Air Force Academy at Nayrab Air Base. In the frame of Contract No. 45926, a team of 10 Czechoslovak instructors was sent to Syria under the code name Course 741. On 12 August 1969, they boarded a Super-Caravelle passenger aircraft of Syrian Arab Airlines at Prague-Ruzyně International Airport and, after a stopover at Athens, arrived in Damascus shortly after midnight. The next day, they visited the headquarters of the Syrian Arab Air Force in Damascus for their official introduction. Here, they were shocked by what they heard. Back in Czechoslovakia, instructors were told to expect a mission lasting two to four months, but Syrian officers welcomed them with a statement hoping that the members of the Czechoslovak team were going to enjoy their two-year stay in Syria! After lunch, the Czechoslovak pilots were whisked to an An-24 transport and flown to Nayrab.

Syrian instructors, themselves graduates of Soviet aviation training centres, suggested to their Czechoslovak counterparts that the use of Russian in mutual communication would be more suitable (at the same time, a small Soviet advisory team was present at the Air Force Academy). However, the teaching of cadets was to be performed in English, and radio traffic during training flights would be in Arabic. In reality, knowledge of the English language was minimal on the part of the Syrian students. Thus, even the teaching had in a large part to be performed in Arabic as well. Due to this newly emerged situation, Major Horák requested the delivery of Czech–Arabic textbooks and dictionaries. However, his demand met with little success. Despite intensive Czechoslovak military assistance to different Arab countries lasting more than a decade, no such publication had been published. Czechoslovak instructors

Table 15: Czechoslovak instructors of Course 741[20]

Rank and name	Position
Major Bohumír Horák	instructor pilot, commander of the advisory group
Major Rudolf Lichnovský	instructor pilot
Major František Hamršmíd	instructor pilot
Major Ernest Makovický	instructor pilot
Captain Štefan Zupko	instructor pilot
Major Jiří Otta	instructor pilot
Major Bohumil Smutný	instructor pilot
Major Kazimír Žurek	instructor pilot
Major Luboš Kašpar	instructor pilot
Captain Karel Doležel	instructor pilot

started flying on 15 August with familiarisation flights around Nayrab Air Base. Immediately thereafter, basic training of cadets lasting 70 flight hours began in earnest. Syrian student pilots had already completed short preliminary flight training of some 20 flight hours on Chipmunk trainers. Although the Syrian training syllabus was used, it caused no problems to the Czechoslovak instructors because it was almost identical to the one used for training new Czechoslovak Air Force pilots.

The training was carried out in three squadrons, each having just three Syrian instructor pilots (including a commander), so the cadre of instructors had to be complemented by Czechoslovaks (for two squadrons) and Soviets (for one squadron). Each Czechoslovak pilot was responsible for the training of five (later increased to six) Syrian cadets. Like in the past, members of Course 741 experienced inadequate maintenance of L-29 Delfins and poor control of flying activity. In the meantime, the Syrians were able to reconstruct Kweres Air Base into a state that enabled regular operations of jet aircraft. Consequently, training was undertaken from this facility during November. Because of the constant malfunctions of L-29s, the flying was performed with a limited number of available aircraft. Despite these complications, good weather conditions enabled the rapid progress of the training.

The original Contract No. 45926 term was extended for an additional 14–20 months. Hence, wives and children of Czechoslovak instructors arrived in Syria for the rest of the duration of Course 741. Syria also signed Contract No. 45932 for further training of new pilots, so another Czechoslovak training team turned up at Nayrab in the middle of December 1969. Code named Course 750, the advisory group was composed of 10 instructor pilots, three teachers of aerodynamics, two teachers of air navigation and a couple of interpreters from the Higher Aviation Training School. While pilots were supposed to stay in Syria for 18–24 months, the rest of the group was to return home after 13 months. Using the experiences of their colleagues from Course 741, a new batch of instructor pilots accomplished their first familiarisation flights on 21 December. In January 1970, following the arrival of members of Course 750, Syrian instructor pilots were transferred to preliminary training on Chipmunks, while Czechoslovaks took over the training on Delfins. At the same time, regular flight training was commenced at Kweres. Members of Course 741 completed basic training of their cadets and continued with the advanced portion, which concluded with the basics of combat employment and air combat in summer 1970. After graduation, the new Syrian military pilots were sent for conversion training on combat aircraft.

In early August 1970, instructors on Course 741 initiated training of a new class of Syrian cadets. At that time, Nayrab was used only for preliminary training on Chipmunks and periodic maintenance of L-29s, while Kweres served for jet training on Delfins. Thus, a minibus containing Czechoslovak pilots shuttled between Aleppo and Kweres in the morning and afternoon each working day. Flying during each week was intensive – usually three-a-half hours daily, with a day off in between. The second batch of Syrian cadets graduated from their basic and continuation training on Course 741 at the end of 1970. The following year started with a relaxed regime, the Czechoslovak pilots training new Syrian instructors and providing advanced training for their senior colleagues. The routine recommenced in March 1971 with the training of the third group of Syrian cadets. This was successfully completed in the middle of July 1971, and members of Course 741 returned safely home on board a Syrian Arab Airlines Super-Caravelle during the following month.[21]

6

ARMING FOR THE NEXT WAR

The Syrian Arab Republic witnessed another *coup d'état* on 13 November 1970, when Minister of Defence Hafez al-Assad overthrew Salah Jadid together with his allies, beginning a long period of rule that was maintained until his death in June 2000. However, transitions in the political landscape in Damascus changed nothing regarding Syria's position as the privileged recipient of Czechoslovak military assistance.

During 1970, Syria considered buying an additional 140–200 refurbished T-34/85 tanks retired from the inventory of the Czechoslovak People's Army. While mental exercises at the Syrian Ministry of Defence were in full swing, Czechoslovak workers prepared the additional delivery of military hardware. Ordered in the frame of Contract No. 33-627-01, the subsidiary of the Automobile Repair Plant at Kutná Hora manufactured 18 TPDA-M and refurbished six TPO mobile tank workshops based on the Praga V3S chassis for the Syrian Arab Army. The vehicles were shipped from a port in Poland in September 1970 and arrived in the Syrian port of Latakia during the following month.[1]

In the end, Syria decided not to buy the obsolete T-34/85 tanks, opting instead for the acquisition of brand-new vehicles. Prague and Damascus signed a credit agreement worth £15 million (850 million CSK) for the purchase of 230 T-55 tanks (including the command version) and 20 L-29 Delfin aircraft. Damascus demanded the delivery of the tanks by August 1971.[2]

One month earlier, Syrian Prime Minister Abdul Rahman Khleifawi had sent a letter to his Czechoslovak counterpart, Lubomír Štrougal, with a request for delivery of further military hardware, including MT-55 armoured vehicle-launched bridges, VT-55 armoured recovery vehicles, TPDA-M and TPO mobile workshops, tank and artillery ammunition, sabotage equipment (plastic explosives or magnetic mines), Tatra 138 trucks, AV-8 recovery vehicles, AB-063.2 mobile cranes, DVH 1622 forklifts and related spare parts. While deliveries of trucks, as well as logistics and support vehicles, were handled directly through Czechoslovak foreign trading companies Motokov and Martimex, the rest became the responsibility of the HTS. Despite warnings by the Federal Ministry of Foreign Trade that Syrian indebtedness with respect to Czechoslovakia had already reached very high proportions (£38 million), the Czechoslovak government – supported by the Presidium ÚV KSČ – decided to provide Damascus with further credit. Apart from political reasons, another motive for this move was the Syrian ability to pay instalments for arms. A corresponding credit agreement worth £10 million for the supply of 90 armoured vehicles, mobile workshops and other arms was signed on 16 January 1972. This represented the last important Czechoslovak arms deal with Syria before another major conflict flared up in the Middle East.[3]

7

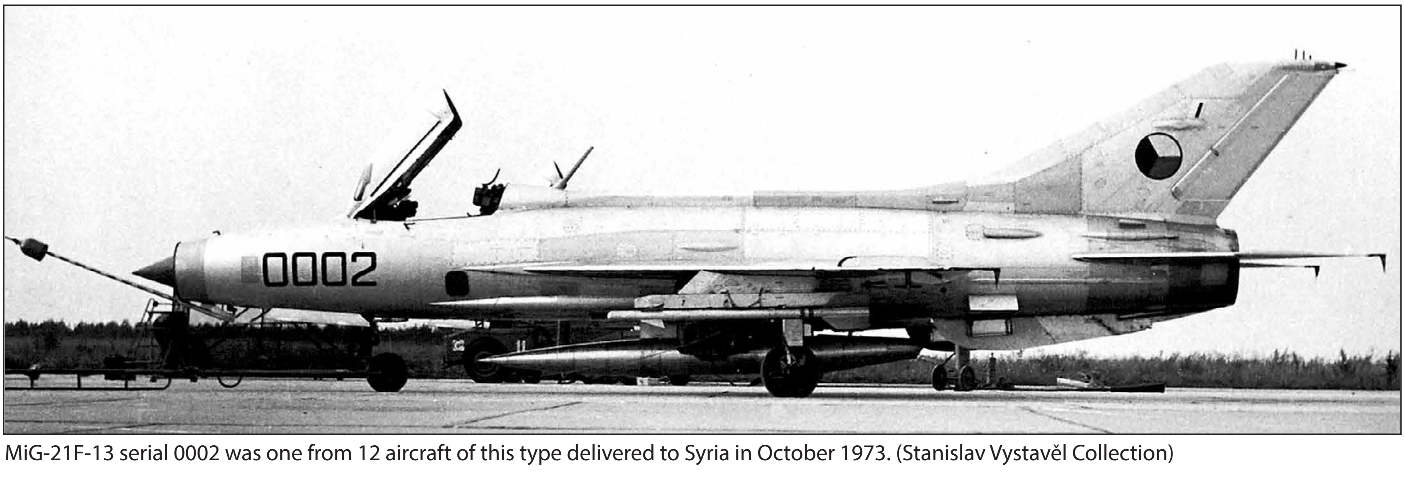
LICKING WOUNDS, ROUND TWO

On Yom Kippur, 6 October 1973 – the holiest day in Judaism and Islam – Egyptian and Syrian military forces successfully crossed ceasefire lines to enter the Sinai Peninsula and Golan Heights, respectively. After several days of bitter fighting, the Israel Defense Forces managed to initially halt the Arab advance and then launch a counteroffensive. Under this Israeli assault, Egyptian and Syrian prospects for military success diminished greatly. Both sides suffered heavy losses, which prompted both the United States and Soviet Union to initiate large-scale resupply of their respective allies. The Presidium ÚV KSČ, under advice from Moscow, approved the provision of free of charge “internationalist help” for the Arab countries in the middle of the fighting on 12 October 1973. The weapons provided by Czechoslovakia were handed over to the Soviet Union, which decided to deliver them all to Syria. Hence, while Egypt received only Czechoslovak medical supplies, requested separately by the Egyptian ambassador in Prague, Syria obtained military materiel worth 193 million CSK (or 387 million CSK in export prices), as listed in Table 16. The supplies of Czechoslovak arms for Damascus received the cover name Operation 99.[1]

Arms and ammunition in combat-ready condition were retired from the stocks of the Czechoslovak People’s Army and handed over to the Soviets, who secured their delivery to the Syrian Arab Republic on ships from the port of Feodosia in Crimea and aboard An-12 transport aircraft. Prague made every effort to accomplish the deliveries for Damascus as fast as possible, with Operation 99 taking place between 12 and 25 October 1973. One of the most important items was a squadron of 12 MiG-21F-13 fighters. They were hurriedly overflown to Kbely from four air bases and disassembled there by technicians of the local Aircraft Repair Plant Kbely. The MiGs were transported on board a total of 16 Soviet An-12 transport planes to Kweres Air Base between 16 and 20 October. A special 40-strong Czechoslovak technical group performed their assembly in a local repair shelter. Working non-stop in two shifts, they carried out the work from 18–25 October. The aircraft were then test flown by four highly experienced Czechoslovak fighter pilots. During these flights, the MiGs were fully armed, including R-3S heat-seeking missiles, because the war was still in full swing. A similar Soviet group was doing identical work at Kweres during the same time.[2]

Czechoslovakia carried out the replacement deliveries of weapons to Syria without any prior conditions and free of charge. Some time later, the Federal Ministry of Foreign Trade found out from unofficial sources that, in November 1973, the Soviet Union additionally negotiated agreements for emergency deliveries of military hardware to Arab countries under the same conditions as

Members of the Czechoslovak team that assembled and test-flew MiG-21F-13s delivered to Syria in October 1973. From left: three Syrian boys, Sýkora, Smékal, Šenkýř, Zlámal and a Syrian boy. (Smékal via Miroslav Irra)



MiG-21F-13 serial 0002 was one from 12 aircraft of this type delivered to Syria in October 1973. (Stanislav Vystavěl Collection)

Table 16: Operation 99 – Czechoslovak emergency delivery of military hardware to Syria during the Yom Kippur War[3]

Type	Number of examples	Note
T-54A, medium tank	28	27 tanks equipped with DShK anti-aircraft machine gun, tanks delivered including ammunition (1,674 rounds 100-JOF-ShK 44, K 53, TK, 744 rounds 100-JPSv-ShK 44, K 53, TK, 744 rounds 100-JPrSv-TK, 8,100 rounds PZ)
T-54AR, medium tank	61	
T-54ARK, command tank	4	
100-JOF-ShK 44, K 53, TK, 100mm high explosive round	5,926	ammunition for T-54A tank and SD-100 self-propelled gun
100-JPSv-ShK 44, K 53, TK, 100mm armour-piercing round	2,956	ammunition for T-54A tank and SD-100 self-propelled gun
100-JPrSv-TK, 100mm high explosive anti-tank round	2,956	ammunition for T-54A tank and SD-100 self-propelled gun
122-EOF-H 38, 122mm high explosive round	3,000	ammunition for vz. 38/M1938 (M-30) howitzer
152-EOF-KH 37, 152mm fragmentation round	10,000	ammunition for M1937 (ML-20) howitzer
57-JOSv-PLK S-60, 57mm high explosive round	5,100	ammunition for S-60 anti-aircraft gun
57-JPSv-PLK S-60, 57mm armour-piercing round	300	ammunition for S-60 anti-aircraft gun
85-JČ-PLK 44, 85mm time-setting round	15,044	ammunition for vz. 44 anti-aircraft gun
85-JPSv-PLK 44, 85mm armour-piercing round	3,000	ammunition for vz. 44 anti-aircraft gun
12,7-PZ, 12.7mm armour-piercing incendiary round	29,500	ammunition for DShK machine gun
vz. 43, 7.62mm round	5,000,240	
vz. 59, 7.62mm round	3,744,000	
9P111, missile launcher	4	part of 9K11 Malyutka portable anti-tank guided missile system
9S415, joystick control unit	4	part of 9K11 Malyutka portable anti-tank guided missile system
9M14M, anti-tank guided missile	50	part of 9K11 Malyutka portable anti-tank guided missile system
RPG-7, anti-tank rocket-propelled grenade launcher	153	
PG-7V, anti-tank rocket-propelled grenade	1,002	ammunition for RPG-7 anti-tank rocket-propelled grenade launcher
MiG-21F-13, fighter	12	delivered aircraft were some of the oldest MiG-21F-13s operated by the Czechoslovak Air Force, delivered including ammunition for NR-30 guns (720 rounds 30-OFZ-NR) and minor accessories (PB-21 braking chutes, S-3 pilot parachutes, etc.)
tank engines, spare parts, rubber bags	-	

the previous arms deals – 50 percent of the value for free, credit over 10–15 years and an interest rate of 2 percent. Other communist countries such as East Germany, Poland, Hungary and Bulgaria also provided armament of a similar volume as Czechoslovakia, without pre-negotiating the terms of supply. Originally, these supplies were considered a gift, but after Moscow's agreements on half-payment for the weapons supplied, Poland, Hungary and Bulgaria also decided to demand payment for half the military hardware they provided during the conflict (or shortly thereafter). However, Syria still considered these supplies a gift. In early 1974, a Bulgarian representative, when requesting compensation for the weapons provided, met with a sharp, negative response from the minister of foreign affairs and minister of defence of the Syrian Arab Republic, urging the Bulgarian government to change its position on the matter. After this experience, the Czechoslovak Federal Ministry of Finance and Federal Ministry of Foreign Trade decided not to demand payment from the Syrians for the "internationalist help".[4]

When the fighting ended, the Syrian Arab Army needed to fill its depleted ranks with new equipment. Consequently, Supplement No. 1 to the credit agreement from 16 January 1972, extending the overall value by an additional £3 million, was concluded on 5 December 1973. The provided funds were spent on the acquisition of 50 VT-55 armoured recovery vehicles, spare parts, tools and repair and training equipment. The Syrians used the opportunity at the time of signing Supplement No. 1 in Damascus to submit an extensive list of arms they urgently needed for their forces. Although a requirement for up to 500 T-55 tanks was originally presented, Syria was now ready to accept 'only' 200 used and 50 brand-new T-55s, including a large number of the derived command variant. Prague agreed to this, and a credit agreement worth £20 million, mostly for the purchase of 165 T-55 tanks and associated armoured support vehicles on the same chassis, was concluded on 20 November 1974.[5]

Large-scale supplies of Czechoslovak armour were supplemented with appropriate training of Syrian personnel. In 1974, a group of 42 Syrian mechanics graduated from a training course at the VAAZ in Brno focused on general overhauls of T-55 tanks, MT-55 armoured vehicle-launched bridges and VT-55 armoured recovery vehicles. The same facility performed identical training for two groups of 50 Syrians during the following year.[6]

Table 17: Czechoslovak arms export to Syria (without Operation 99), 1970–74[7]

Type	Number of examples	Year of delivery	Note
vz. 44, 26.5mm signal pistol	93	1973	from the stocks of the Czechoslovak People's Army
26.5mm signal round	1,882	1973	from the stocks of the Czechoslovak People's Army
Sa 26, 7.62mm submachine gun	100	1970	from the stocks of the Czechoslovak People's Army
vz. 24, 7.92mm rifle	250	1970	from the stocks of the Czechoslovak People's Army
vz. 52/57, 7.62mm rifle	1	1973	from the stocks of the Czechoslovak People's Army
vz. 58, 7.62mm assault rifle	95	1973	from the stocks of the Czechoslovak People's Army
vz. 61, 7.65mm submachine gun	110	1970	from the stocks of the Czechoslovak People's Army
	1	1973	
vz. 37, 7.92mm heavy machine gun	2	1970	from the stocks of the Czechoslovak People's Army
ammunition for small arms and tank machine guns	10,800	1970	from the stocks of the Czechoslovak People's Army
	1,600	1972	from the stocks of the Czechoslovak People's Army
F-1, hand grenade	1,840	1973	from the stocks of the Czechoslovak People's Army
40-R-Os, 40mm illuminating rocket	2,045	1973	from the stocks of the Czechoslovak People's Army
SON-9, fire control radar	12	1970	from the stocks of the Czechoslovak People's Army
	10	1972	from the stocks of the Czechoslovak People's Army
	2	1973	from the stocks of the Czechoslovak People's Army
T-34/85, medium tank	100	1970	from the stocks of the Czechoslovak People's Army
T-54AR, medium tank	154	1970	from the stocks of the Czechoslovak People's Army
T-54ARK, command tank	6	1970	from the stocks of the Czechoslovak People's Army
T-55, medium tank	175	1971	newly manufactured
	49	1972	newly manufactured
VT-55 (VT-55KS), armoured recovery vehicle	15	1971	newly manufactured
	45	1972	
	50	1973	
	50	1974	
MT-55 (MT-55KS), armoured vehicle-launched bridge	30	1972	newly manufactured
TPO, mobile tank workshop	6	1970	on Praga V3S chassis, from the stocks of the Czechoslovak People's Army
	10	1973	
TPDA-M, mobile tank workshop	18	1970	on Praga V3S chassis, from the stocks of the Czechoslovak People's Army
	20	1973	
L-29 Delfin, training aircraft	20	1971	newly manufactured, in total 78 Delfin trainers were delivered to Syria
M-701, jet engine	20	1971	spare engine for L-29 Delfin, newly manufactured
R-113, tank radiostation	50	1971	from the stocks of the Czechoslovak People's Army
TÚ-11R, field telephone exchange	2	1973	from the stocks of the Czechoslovak People's Army
NS 3000, charger set 3kW	4	1973	from the stocks of the Czechoslovak People's Army
PK-12, field kitchen	3	1973	from the stocks of the Czechoslovak People's Army
vz. 53, command tent	15	1973	from the stocks of the Czechoslovak People's Army
medical tent	2	1973	from the stocks of the Czechoslovak People's Army
combat helmet	70,000	1973	from the stocks of the Czechoslovak People's Army
	15,000	1974	from the stocks of the Czechoslovak People's Army

8

ASSAD'S DEALS

In April 1975, a delegation of the ÚV KSČ led by Secretary Vasil Biľak visited Syria. During a discussion with Biľak, Syrian President Hafez al-Assad expressed his dissatisfaction with the Czechoslovak inability to provide 500 tanks, since Prague was capable of supplying only a much scaled-down number of 165 vehicles. The Czechoslovak secretary tried to calm Assad with a lengthy explanation of the limitations of tank production at Závody ťažkého strojárstva Martin. He claimed that this was due to extraordinary demands from India and mainly Libya, who were ready to pay for delivered tanks in cash. Biľak attempted to comfort Assad with a statement that Libyan Prime Minister Abdessalam Jalloud had promised Prague that some of the tanks would be bought for Syria. However, this did little to lessen Assad's discontent: '[The] President responded that Libya not only had [never] delivered to Syria any single tank from the Czechoslovak Socialist Republic but had never informed him about [such an] intention."[1]

The highlight of Czechoslovak and Syrian relations in the 1970s was the official visit of Hafez al-Assad to Czechoslovakia from 8–11 September 1975. The military section of the Syrian delegation was led by General Hikmat al-Shihabi, the Chief of the General Staff of the Syrian Arab Armed Forces. During negotiations with František Langer, the director of the HTS, General al-Shihabi requested deliveries for 1976–80 to comprise 500 T-55 tanks, 500 BVP-1 infantry fighting vehicles, 100 VT-55 armoured recovery vehicles, 20 JVBT-55 armoured crane vehicles, 50 mobile tank workshops,

A convoy of BVP-1 (or BMP-1) infantry fighting vehicles of the Syrian Arab Army seen in Lebanon during the 1982 Lebanon War, June 1982. Závody ťažkého strojárstva Detva manufactured 1,275 BVP-1s for Syria between 1981 and 1986. (via Martin Smisek)

Czechoslovakia played a crucial role in the rearming of the Syrian armoured troops after the grievous losses they suffered in the Yom Kippur War. Thus, between 1976 and 1981, the Syrian Arab Army obtained 527 T-55 medium tanks as well as an additional 380 vehicles in the derived T-55K command variant from the Czechoslovak licence production. (via Martin Smisek)

Table 18: Czechoslovak-Syrian credit agreements for deliveries of armament for the Syrian Arab Armed Forces, 1974–89[4]

Date, value, payment conditions	Actual drawdown	Provided arms and military assistance	Note
20 November 1974, £20,000,000, 22.5% paid outside credit, 77.5% credit repayable 1977–84 with interest rate of 3% p.a.	£20,049,112.09 (US$25.1 million)	land vehicles, spare parts, training equipment	
18 September 1975, £65,000,000, 22.5% paid outside credit, 77.5% credit repayable 1978–85 with interest rate of 3% p.a.	£64,996,211.85 (US$71.2 million)	land vehicles, spare parts	
4 October 1978, US$180,000,000, 27.5% paid outside credit, 72.5% credit repayable during 1982–88 with interest rate of 3% p.a.	US$179,954,078.29	land vehicles, training aircraft, spare parts, military installations	including Supplement No. 1 signed on 18 March 1980 (provided credit repayable 1984–90)
13 January 1981, US$400,000,000, 27.5% paid outside credit, 72.5% credit repayable 1984–90 with interest rate of 3% p.a.	US$399,682,748.16	land vehicles, training aircraft, ammunition, military installations (repair plants)	
19 May 1984, US$350,000,000, 27.5% paid outside credit, 72.5% credit repayable 1987–93 with interest rate of 3% p.a.	US$167,578,368.67 (as of June 1985)	land vehicles, general overhauls of aircraft engines, simulators, training equipment, spare parts	

Table 19: Deliveries of newly manufactured armoured vehicles from Czechoslovakia to Syria, 1971–92[8]

Type	Number of examples	Note
T-55, medium tank	951	deliveries 1971–72, 1976–81
T-55K, command tank	380	
VT-55 (VT-55KS), armoured recovery vehicle	359	deliveries 1971–79
MT-55 (MT-55KS), armoured vehicle-launched bridge	30	delivered in 1972
JVBT-55 (JVBT-55KS), armoured crane vehicle	61	deliveries during the second half of the 1970s
T-72M, main battle tank	50	delivered in 1985
T-72M1, main battle tank	152	deliveries 1990–92
T-72M1K, command tank	44	deliveries 1990–92
BVP-1, infantry fighting vehicle	1,275	deliveries 1981–86, 115 and 110 vehicles ordered in August 1982 and June 1983 respectively, 600 examples delivered until 1983
AMB-S, ambulance vehicle	200	

40 L-39 Albatros training aircraft, 500 Tatra 148 trucks, 35 AD-160 mobile cranes, 500 tonnes of TNT, fuses, cables and military bridges. Thereafter, on 18 September, a further credit agreement worth £65 million for funding Syrian military acquisitions was signed.[2]

In June 1978, Syria requested 60 L-39 Albatros training aircraft, 60 AI-25TL spare engines, 300 T-55 medium tanks and 60 derived support vehicles, as well as related spare parts. In October of the same year, a Syrian military delegation, led by Minister of Defence Mustafa Tlass, visited Czechoslovakia to sign a new credit agreement for supplies of Czechoslovak arms and military assistance. The Syrians used the opportunity to widen their demands with a request for delivery of 500 BVP-1 infantry fighting vehicles and 200 AMB-S ambulance vehicles. During an official visit of the Czechoslovak Minister of National Defence, Army General Martin Dzúr, to Damascus in November 1979, the Syrian Ministry of Defence presented a new list of extensive arms requirements, including 1,000 BVP-1 infantry fighting vehicles, 200 AMB-S tracked ambulances and 25–30 L-39 Albatros aircraft. In a letter addressed to his Czechoslovak counterpart Lubomír Štrougal in spring 1983, Syrian Prime Minister Abdel Raouf Qassim requested another new credit agreement to create a basis for further Syrian arms acquisitions, such as an additional 500 BVP-1 infantry fighting vehicles, 200 AMB-S ambulances, three Ramona passive surveillance systems or large numbers of T-72 tanks and Kladivo fire control systems for the upgrade of T-55s to a standard similar to Czechoslovak T-55AM1 tanks.[3]

Despite repeated warnings from the Federal Ministry of Foreign Trade that the size of the Syrian debt to Prague was reaching critical proportions, the Presidium ÚV KSČ approved all credit agreements almost according to Syria's wishes. The main reason was the position of Damascus as Prague's main client and its previous ability to repay all financial obligations from deliveries of military hardware only with minor problems. The last 'special' credit agreement between Czechoslovakia and Syria was signed on 19 May 1984 (all credit agreements awarded after the Yom Kippur War are listed in Table 18). However, Syria's excessive demands repeatedly collided with the production capabilities of Czechoslovak manufacturing plants.

A Syrian T-54A medium tank, decorated with posters of Hafez al-Assad, on a Mercedes-Benz 'Kurzhauber' tank transporter leaving West Beirut in summer 1982. In the frame of the urgent military assistance during the Yom Kippur War, Prague donated 28 T-54A, 61 T-54AR and four T-54ARK tanks from the stocks of the Czechoslovak People's Army to Syria. (via Martin Smisek)

Thus, the number of arms actually delivered to the Syrian Arab Republic was usually lower than that requested (as shown in Table 19 detailing deliveries of armoured vehicles to Syria).

Czechoslovakia not only delivered military vehicles and aircraft, but provided design work, construction supervision and related equipment for several new Syrian military facilities that were built using finances from various credit agreements. In the late 1970s, the Military Design Institute became the design authority for the Signal Training Centre at al-Nabek, while Tesla Pardubice was selected as the Czechoslovak main contractor for the facility. Meanwhile, INPRO Praha served simultaneously as the design authority and main contractor for the vast military automobile repair plant at Aleppo (the project for the design of the plant was awarded in 1979). In 1982, the ceremonial opening took place of the tank and automotive training school at Homs that was built with Czechoslovak assistance. Finance provided through the credit agreement of 19 May 1984 were to be used for the construction of a steel mill and a forge.[5]

One of the most important Czechoslovak business partners of the Syrian Ministry of Defence was the Motokov foreign training company that served as the supplier of Czechoslovak trucks. Large numbers of Tatra 148 vehicles were delivered during the 1970s for the Syrian Arab Army. In the 1980s, they were superseded by the latest Tatra 815 trucks. A contract for their supply in several versions (two cargo bed variants, CA-16 fuel tank truck and CAV-11 water tank truck) was signed in 1984.[6]

However, the golden age of Czechoslovak-Syrian military cooperation was not to last forever. Another top-level meeting between Czechoslovak and Syrian officials took place in June 1984, when Czechoslovak Prime Minister Lubomír Štrougal visited Damascus. Despite mounting Syrian problems with payments of foreign loans, Syrian President Hafez al-Assad and Prime Minister Abdel Raouf Qassim expressed their intention to buy additional Czechoslovak armament, such as 500 T-72 tanks and 600 BVP-1 infantry fighting vehicles in different versions, on new credit worth a stunning US$700–800 million. Syria was already at this time paying instalments to Czechoslovakia only with great difficulty. Therefore, Štrougal provided a polite answer that further discussions on this matter would be held with consideration to current Czechoslovak production and financial abilities. In the end, no credit was provided because Damascus completely stopped repaying all its commitments to Prague.[7]

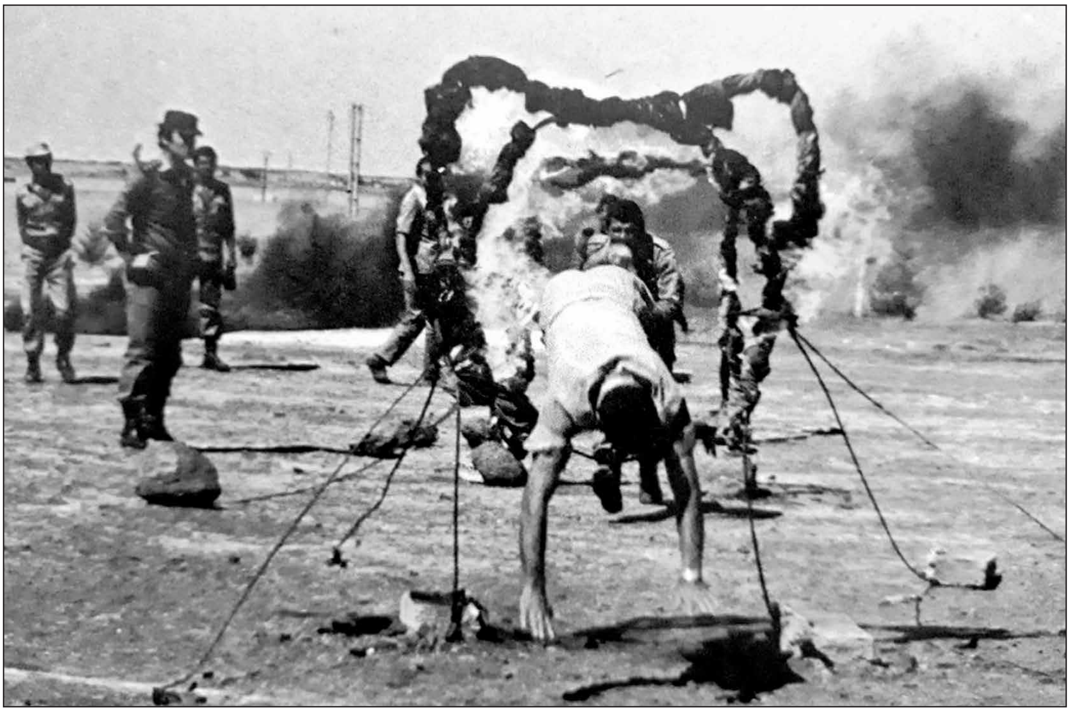
TRAINED BY THE ZF VAAZ

While deliveries of new arms from Czechoslovakia were underway, the Antonín Zápotocký Military Academy provided education for Syrian military personnel. Based on Contract No. 52824, the postgraduate study of three Syrian officers (Abdul Aziz Moustafa Hajjar, Anwar Ahmed Kamel and Mahmoud Ahmed Kurdi) in military engineering started under the code name 104/S-9 at the ZF VAAZ on 1 June 1968. Because of their low preparedness in theoretical subjects, they had to attend a preparatory course at Brno from 18 April. The postgraduate study was accompanied by tensions caused by Syrian reluctance to pay properly for services provided. This led to delaying their education, which in turn served as a pretext for unsubstantiated complaints from Syrian military attaché Captain Kanaan. According to the original plan, the three Syrian officers were supposed to finish their studies in Czechoslovakia in 1971.[9]

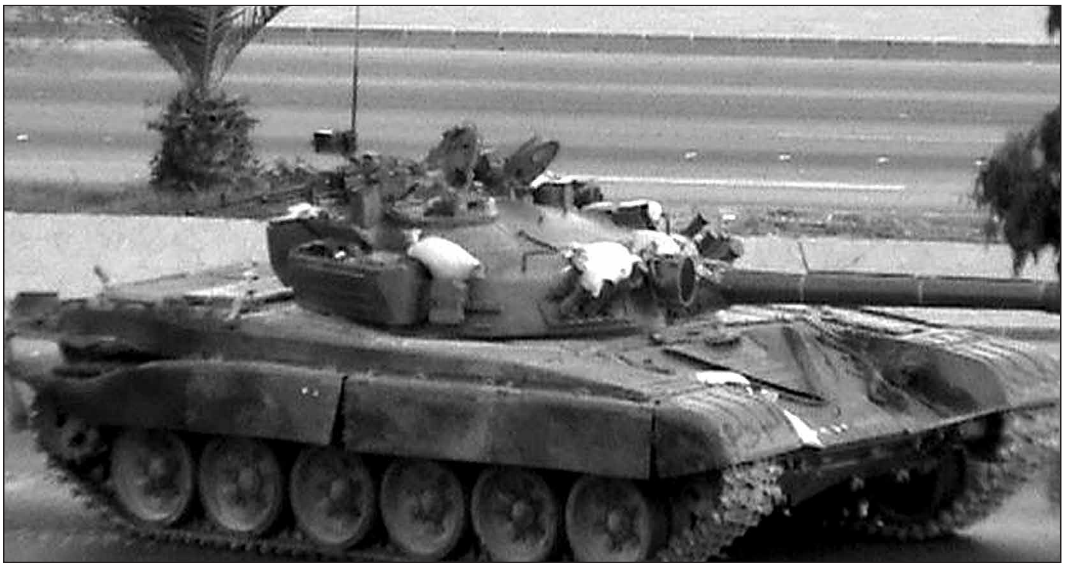
Under the cover name Course 707, lasting from January–June 1970, three Czechoslovak advisors were to arrive in Syria and provide instruction for signal officers who served as teachers at local military training facilities.[10]

The VAAZ played an active role in the establishment of the Military Signal School at Homs. This installation was constructed during the early 1970s with Czechoslovak assistance – the design was carried out by the Military Design Institute, and the Tesla Pardubice company served as the main contractor. The VAAZ was to provide complete teaching documentation (teaching plans and programmes, organisational system, school rules, etc.), textbooks and instruction of Syrian teaching staff. Based on Contract No. 43224, from 30 January 1973, the VAAZ trained teachers for the Military Signal School under the code name Course 753. As of 1975, 14 Syrians finished the study in Brno, while an additional 11 teachers were still studying at the VAAZ.[11]

Beginning in 1972, dozens of Czechoslovak advisors served in this educational facility too. Many of the instructors returned to Czechoslovakia when the contract expired in 1975. It is likely that the facility then experienced some problems, because the Syrians requested the return of Czechoslovak advisors in 1976. The dispatch of up to 50 military experts (including two advisors for the school's commander) was planned for 1977. In 1979, the Czechoslovak



Demanding physical training at an unknown Syrian military academy during the 1980s. (via Martin Smisek)



A T-72M1 from Czechoslovak production, operated by the notorious 4th Armoured Division (a unit subordinated directly to the brother of the Syrian dictator Bashar al-Assad, not to the Syrian Arab Army) on the streets of Homs in late July 2012. Notable are skirts made of thick rubber. (via R. S.)

Federal Ministry of National Defence provided the following training for the Syrian Arab Armed Forces: five-year-long master's studies for 10 officers in the tank specialisation, a course for 10 experts in the field of artillery and infantry weapons, a course for 45 teachers from the tank and automotive school, a course for 100 tank mechanics, a course for 68 workers from the automobile repair plant, a course for workers at the ammunition plant and a course for up to 50 staff members from the signal centre.[12]

The Syrian military leadership, satisfied with the 'services' of the VAAZ, even requested the establishment of a military academy that would have Czechoslovak assistance. However, this demand had to be turned down in early 1974 because the Czechoslovak military teaching staff was fully occupied at various military educational establishments in Czechoslovakia and the Military Technical College in Cairo.[13]

The last Syrian students finished their studies at the VAAZ in 1990. Until this time, the Antonín Zápotocký Military Academy provided training for 753 Syrians in Czechoslovakia and Syria.[14]

NEW JET TRAINERS

The Syrian Arab Air Force became the first export user of L-29 Delfin training aircraft outside Europe when Syria received 78 aircraft of this type. The Czechoslovak trainers were not only used for the training of new pilots at the Air Force Academy, but also for patrol duties along the Syrian–Lebanese border. However, the aircraft experienced quite a high rate of attrition – 15 years after the delivery of the first example, only 35 Delfins remained in airworthy condition. This and the introduction of a new generation of Soviet fighters and fighter-bombers such as the MiG-23 and Su-20/22 family prompted the need for a successor training aircraft.

Left with little option, the Syrians ordered the first examples of the new Czechoslovak L-39 Albatros jet trainer in 1979. Deliveries of 55 L-39ZO aircraft were undertaken between 1980 and 1982 (the last recorded flight of an L-29 Delfin of the Syrian Arab Air Force took place in 1983). All airplanes were completely assembled at the Aero Vodochody plant and then flown to Syria by Czechoslovak instructor pilots from the 2nd Aviation Training Regiment (*2. letecký školní pluk*). Together with aircraft, the TL-39 flight simulator and NKTL-29/39 ejection simulator were also delivered. Albatros trainers were operated by the Air Force Academy from the air bases at Kweres and al-Qusayr. Syria also decided to order the L-39ZA training and light attack variant, with 44 aircraft of this version delivered to Syria between 1983 and 1986. Like before, after assembly, the aircraft were overflown by Czechoslovak pilots to Syria, this time by members of the 30th Fighter Bomber Aviation Regiment (*30. stíhací bombardovací letecký pluk*). The L-39ZAs served with units deployed at Jirah and Abu al-Duhur air bases, which used them for border patrolling to prevent incursions and smuggling.[15]

During a visit by Minister of General Mechanical Engineering Pavol Bahyl to Syria in November 1981, the Syrians expressed their interest in acquisition of the new L-39MS Albatros training and light combat aircraft that was currently in the initial stages of its development. The Syrian Arab Air Force planned to introduce this

Table 20: Overview of L-39 Albatros training aircraft delivered to Syria, 1980–89[17]

Year	Variant	Number of examples	Hand over, overflight
1980	L-39ZO.1	19	10 June 1980 – 2 September 1980
1980	L-39ZO.2	22	19 August 1980 – 13 January 1981
1981	L-39ZO.2	6	23 June 1981
1982	L-39ZO.2	8	23 March – 6 April 1982
1983	L-39ZA.2	16	2 September 1983 – 7 December 1983
1984	L-39ZA.2	20	10 January 1984, 10 April 1984 – 18 June 1984
1985	L-39ZA.2	7	5–19 February 1985
1986	L-39ZA.2	1	29 July 1986

type as a replacement for MiG-17F fighters. However, the large-scale financial problems of Damascus in the second half of the 1980s precluded deliveries of any Czechoslovak military aircraft to Syria.[16]

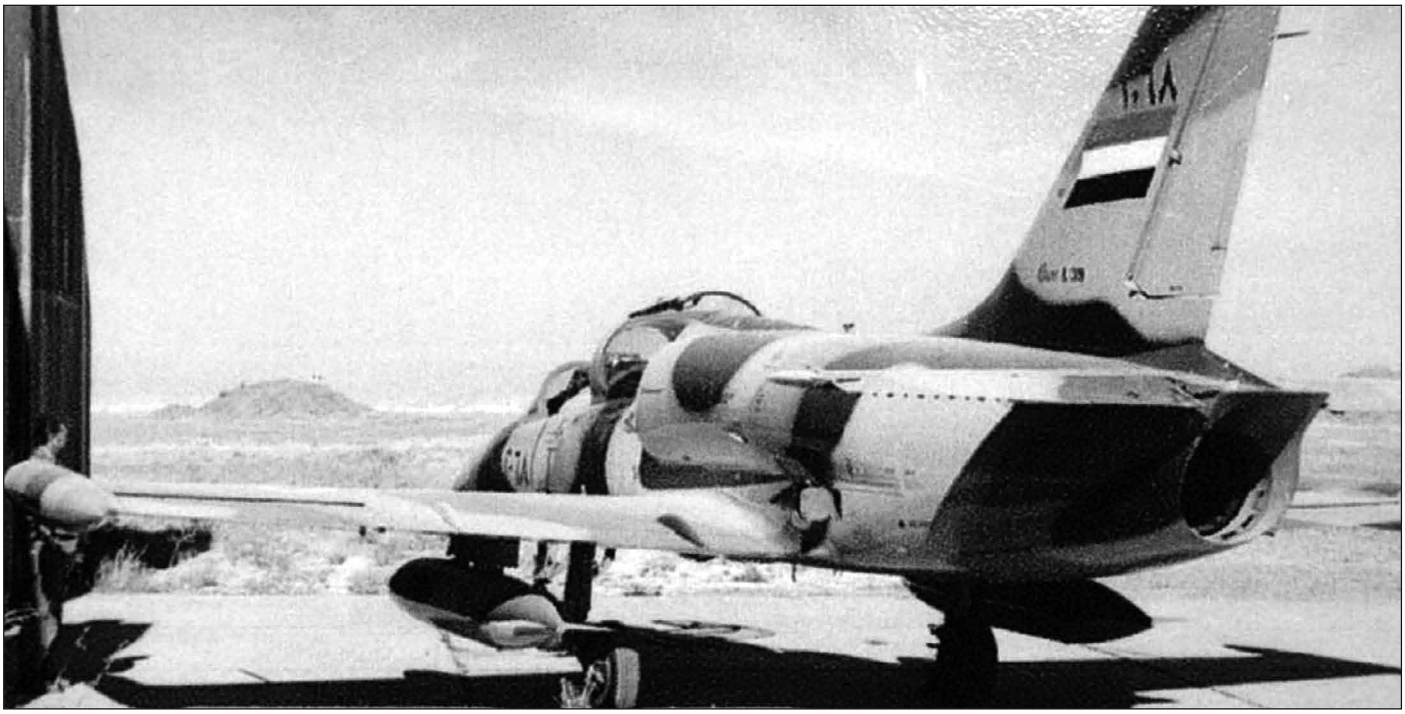
The introduction of the first L-39ZO Albatros aircraft took place at the time of the Syrian Islamist uprising, a series of revolts and armed insurgencies undertaken mainly by the Muslim Brotherhood from 1976–82 that aimed to challenge the authority of Assad's regime. Violent actions by insurgents targeting Alawis and Ba'athists, no matter whether civilians or off-duty military personnel, were usually followed by bloody reprisals by security forces loyal to the Ba'ath Party. Some of the Muslim Brotherhood's operations were focused on the elimination of foreign military advisors. Thus, Syria at these times became a very dangerous place for servicemen from the Warsaw Pact countries in general, and for the Soviets in particular.

Indeed, two Soviet military advisors were shot dead at Hama on 15 January 1980. During the following day, a bomb exploded at the Aeroflot offices in Damascus. Early in the morning of 21 May 1980, a militant disguised in Syrian military uniform opened fire with an automatic weapon at a minibus that was driving Soviet civilians and technical experts to a military plant in Damascus. He then threw a hand grenade at the vehicle before fleeing. One Soviet advisor was killed in the attack, with a further four wounded. A major of the Syrian security services who served as their bodyguard was also killed, though the Syrian driver escaped with minor injuries. At the time, some 1,200 Syrian bodyguards provided security for 600 Soviet experts deployed in Syria. Attacks against advisors from the Soviet Union were motivated by a generous reward of some 300,000 Syrian pounds (*ca*. US$70,000) paid by the Muslim Brotherhood for every successful operation. Thus, despite Syrian security measures, the Soviet embassy at Damascus registered 18 assaults against Soviet citizens in Syria in 1980, with 14 wounded and eight killed.

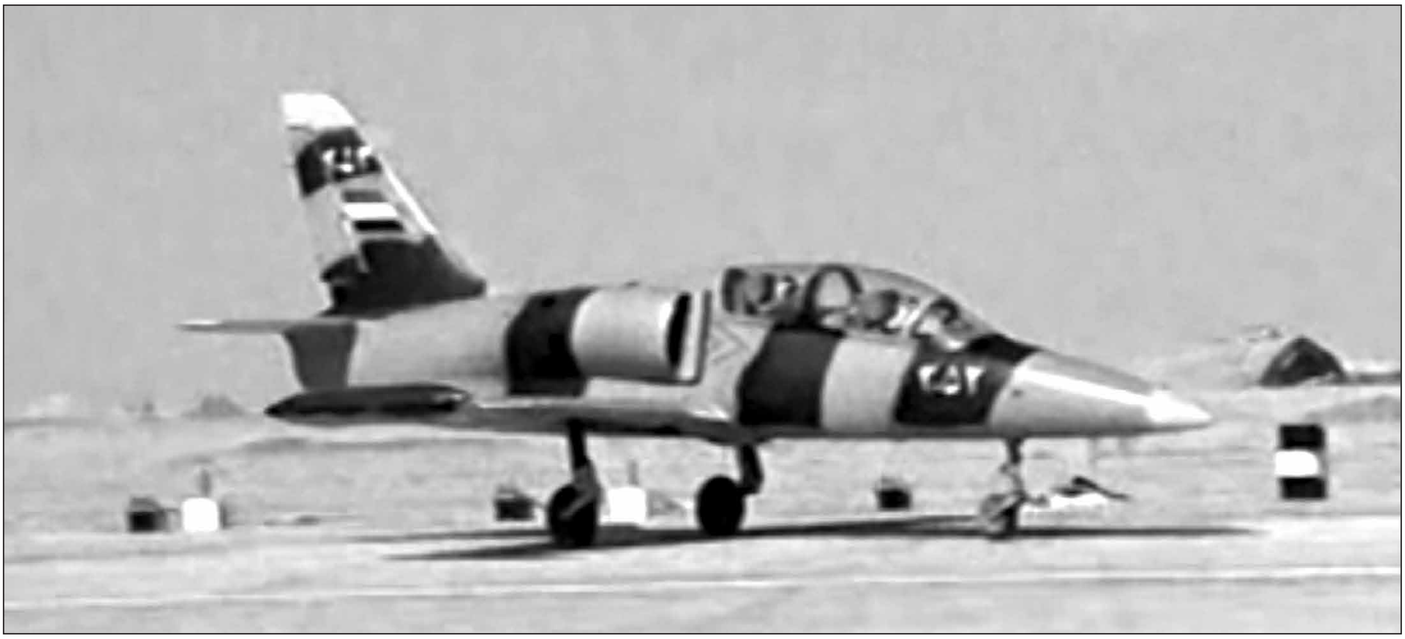
Facing these developments, Prague demanded appropriate security for Czechoslovak advisors in Syria as well. Thereafter, instructor pilots sent to Syria to provide a successful introduction of L-39ZOs into the service of the Syrian Arab Air Force were protected by Syrian bodyguards at literally every step. Czechoslovak servicemen were driven to the air base in protected convoys and were never left alone. According to available information, no Czechoslovak military advisor was killed or wounded during the time of the Muslim Brotherhood's insurgency.[18]

ELECTRONIC INTELLIGENCE

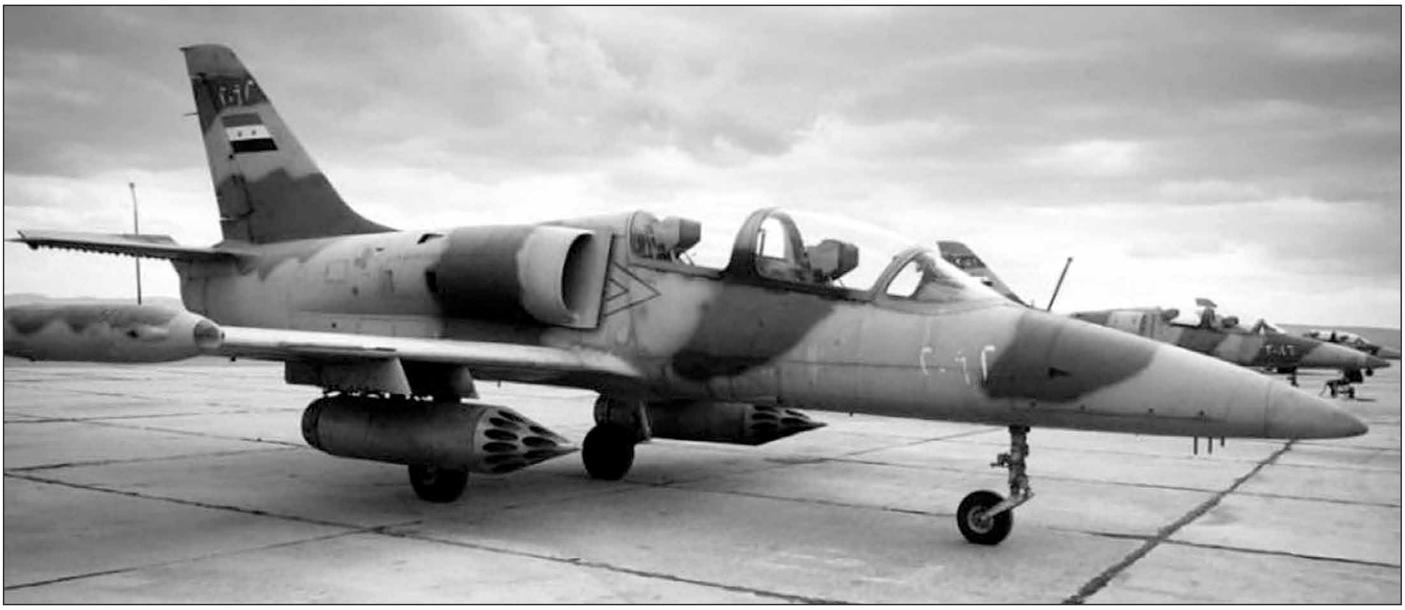
On 9 June 1982, midway through the second Israeli invasion of Lebanon, the Israeli armed forces launched Operation Mole Cricket 19. This took place in the course of an attack on the Syrian Arab Army units deployed in the country, when the Israelis decided to destroy the integrated air defence system protecting enemy units in the Beqa'a Valley. Using new technology and innovative tactics



Serial 2068 and the lack of the gun underneath the cockpit section identify this Albatros as one of 55 L-39ZOs acquired by Syria during the 1980s. Notably, the aircraft was photographed while still wearing its original camouflage pattern, applied prior to delivery (for details, see colour section). (Tom Cooper Collection)



An L-39ZO of the SyAAF (serial 2057), as seen during the mid-2000s. By this time the Syrian air force was already in very poor condition. (Tom Cooper Collection)



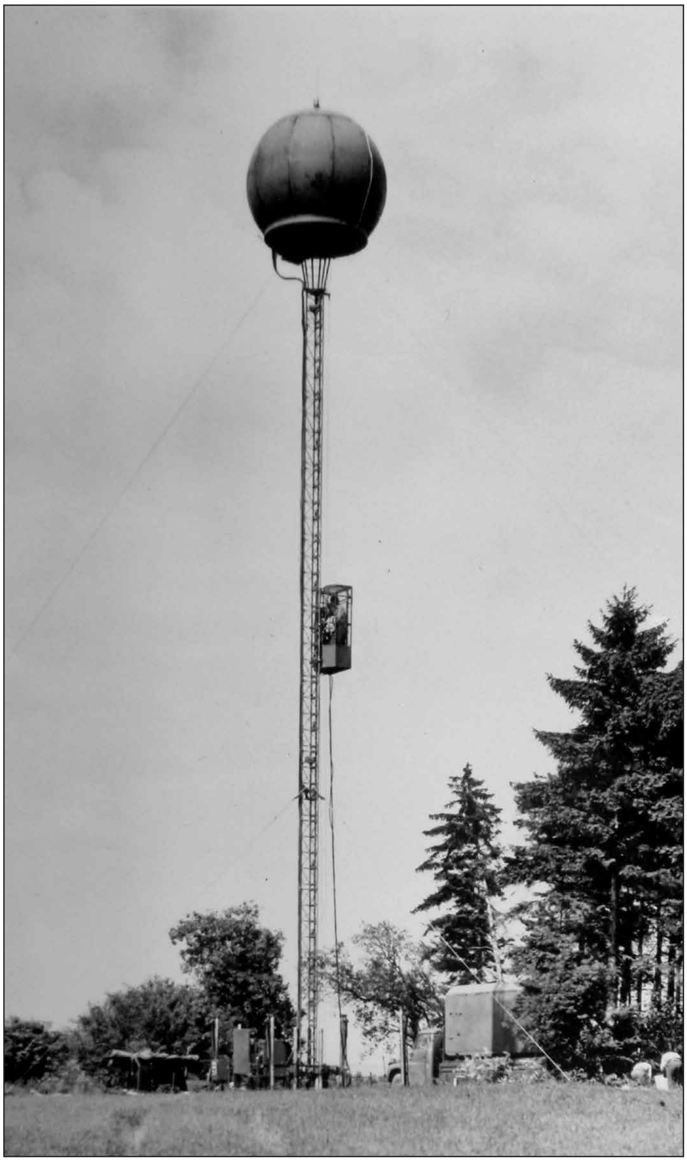
Since the onset of the civil war in Syria of 2011, the SyAAF has suffered extensive losses – in combat and to crashes caused by the generally poor condition of its aircraft. Designed for ease of maintenance and operations, L-39s survived all the challenges and by 2016 became one of the most important strike assets still operational. This L-39ZO (serial 2092) was photographed in 2017, at Kweres AB. (via R. S.)

A row of L-39s undergoing overhauls at The Works, the SyAAF's primary maintenance facility, on the military side of Nayrab Air Base (Aleppo International Airport). (via Martin Smisek) incorporating massive volumes of very effective jamming, the Israeli Air Force inflicted heavy losses, knocking out most of the deployed surface-to-air missile sites and shooting down more than 20 Syrian MiGs.

Upon subsequent analysis undertaken by a team of Soviet military experts, the General Staff of the Armed Forces of the USSR recommended the Syrians obtain a Czechoslovak KRTP-81 Ramona passive surveillance system, of which the Soviet Union was to become the largest user. Ramona was a second-generation Czechoslovak electronic support measures system, using measurements of time difference of arrival of pulses at three sites to accurately detect and track airborne emitters by multilateration. After protracted development, the KRTP-81 (the forerunner of the more famous KRTP-86 Tamara) was officially introduced into the Czechoslovak People's Army on 1 July 1981. The capabilities of the Czechoslovak system elicited great interest by Soviet military authorities, who decided to buy 14 KRTP-81 Ramona systems and a further 10 upgraded KRPT-81M Ramona-M systems manufactured by Tesla Pardubice. Soviet Ramonas were deployed mostly around the coast of the USSR, for example at Liepāja, Tallinn, Sofporg, Murmansk, Vladivostok, Sakhalin and Sukhumi.

Taking Soviet advice seriously, Syria wasted no time and contacted the Czechoslovak HTS. A delegation led by Major General Mohammad Samir al-Atai, Chief of the Radar Department of the Syrian Arab Air Defence Force, visited Czechoslovakia in the summer of 1983. During discussions with Czechoslovak experts, held between 27 June and 6 July, Major General Salah al-Din al-Akhram, Chief of the Electronic Warfare Department, specified the aerial defence system's expected operational employment – the detection of sudden Israeli airstrikes from known approach directions, as well as surveillance of Israeli E-2C Hawkeye airborne early warning aircraft. Upon assessment of operational needs, the capabilities of the KRTP-81 and Syrian topography, Czechoslovak representatives proposed that three Ramona systems would be optimal for Syria's requirements. The Syrian delegation agreed, on the condition that one system would first be bought, then after its successful evaluation and service over several months, a further two Ramonas would be ordered. The first KRTP-81 system (originally intended for one of the Czechoslovak special purpose electronic intelligence battalions) was delivered to Syria on board several Il-76 transport aircraft in 1984, using funds provided in the frame of the credit agreement awarded in 1980. Training of Syrian operators was undertaken at the VAAZ in Brno and at a Czechoslovak special purpose electronic intelligence battalion near the border with West Germany. Subsequently, Czechoslovak military instructors were deployed to Syria for at least two years.

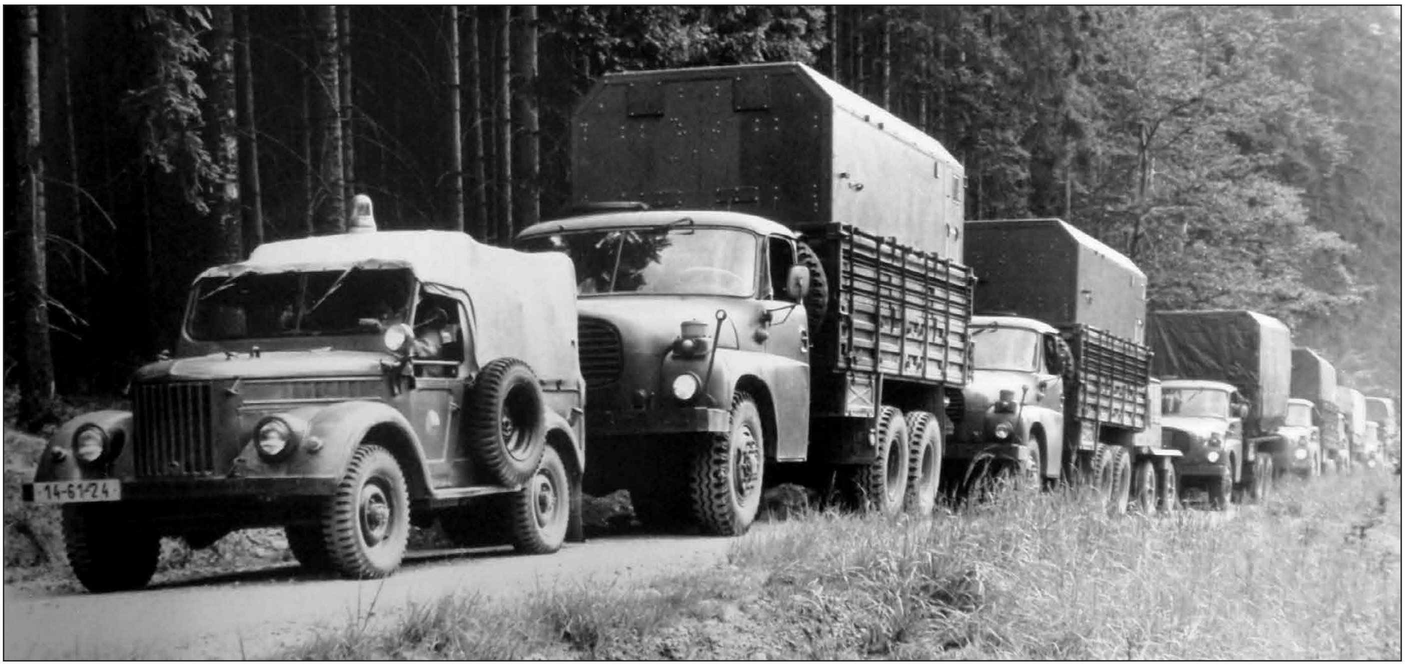
After the first Ramona's successful introduction into the inventory of the Syrian Arab Armed Forces, a contract for another two operational systems and one KRTP-81M training system was concluded in June 1985. This deal was financed by the credit agreement from 1984. The first Ramona-M was delivered in 1985 and its installation was completed in November 1986. The system was deployed on the Mediterranean coast near Latakia. In order to protect this KRTP-81M from surveillance and possible raids by seaborne enemy commandos, the deployment site, designed by the Military Design Institute in Prague, was hardened and protected by several blockhouses, as well as hidden tanks. Indeed, these measures cost the lives of several Israeli special forces operators sent to attack the site. In 1985, the second KRTP-81M and the training system were supplied. The installation of the last Ramona-M was concluded during the autumn of 1989.



Deployed antenna mast of the KRTP-81 Ramona passive surveillance system of the Czechoslovak People's Army in the early 1980s. The disadvantage of the system was the long preparation and installation time before the start of the operation. (VÚA-VHA Praha)

Intrigues within the top levels of the Syrian Arab Armed Forces meant that the capabilities of the Czechoslovak passive surveillance system were to cost Major General Salah al-Din al-Akhram his job. A pair of Israeli combat aircraft carried out a bombing raid without opposition because they were not detected by Syrian radars. A subsequent investigation showed that the Planžet-M graphic display of the KRTP-81 at the central air defence command post recorded the track of both enemy airplanes and their parameters without problems. However, combat units were not alerted because nobody had been monitoring the Planžet-M display properly. This fault became the pretext for the groundless sacking of Major General al-Akhram.

The Syrian Ramonas, by their user's demand, had a powerful cooling system and a secure radio-relay data-link from the operational sites to the central command post in Damascus, while several dummy sites were erected and equipped with infrared and electromagnetic decoy systems of Czechoslovak origin. Syrian KRTP-81 and KRTP-81M systems were deployed in Damascus, Latakia and Suweida. In order to provide effective maintenance and spare parts, Tesla Pardubice established a service centre in Damascus for technical support of the Syrian Ramonas.[19]

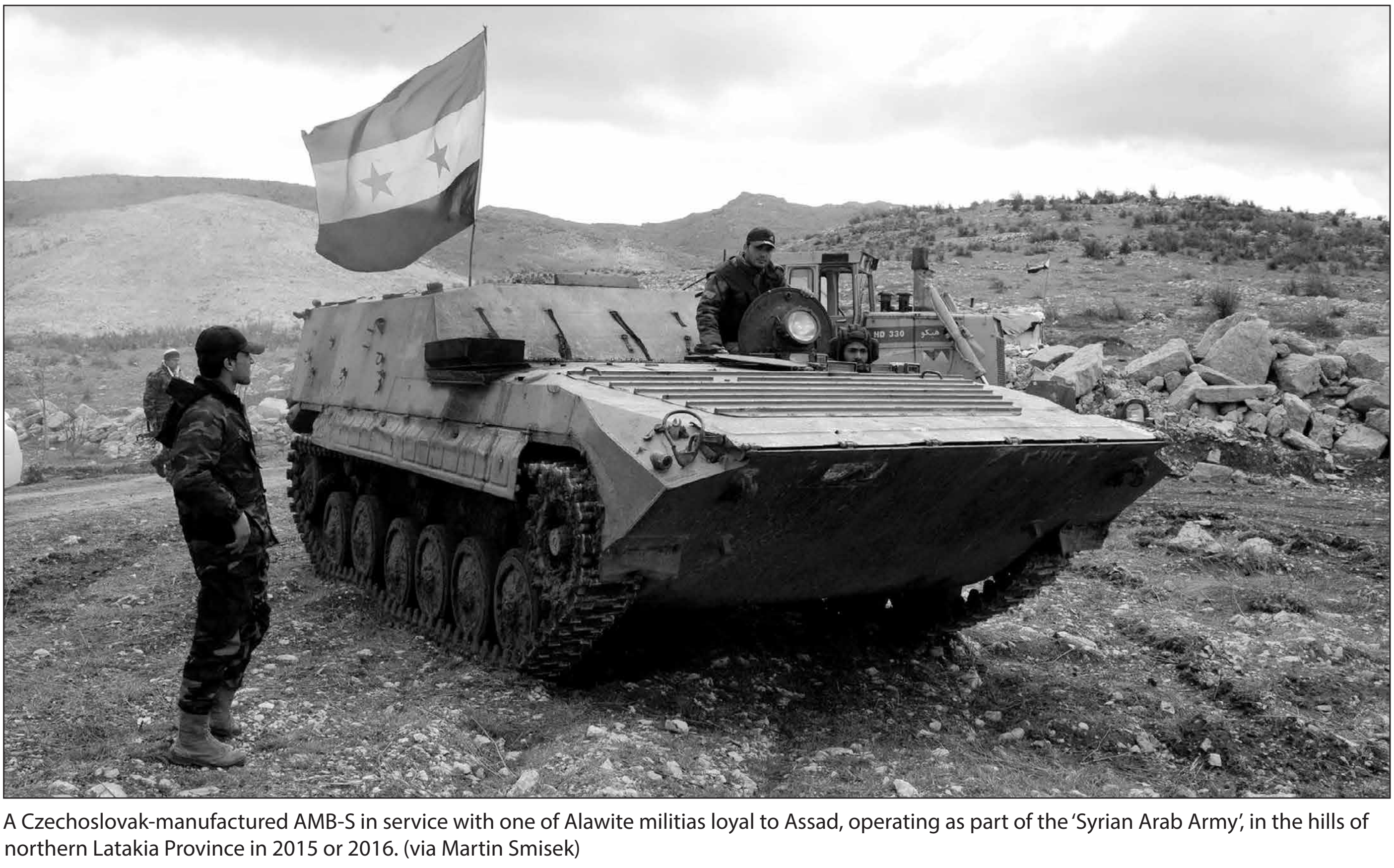


A convoy led by a GAZ-69 and composed of Tatra 148 VNM trucks transporting parts of the KRTP-81 Ramona of the Czechoslovak People's Army in the early 1980s. In total, 14 Tatra 148 VNM vehicles were needed for the transport of the complete system which was made up of three pallets with antenna masts and 11 containers. (VÚA-VHA Praha)

BITTER END

By the end of 1983, Czechoslovakia had delivered around 1,300 T-55 tanks and 600 BVP-1 infantry fighting vehicles to Syria, together with some 100 L-29 Delfin and L-39 Albatros training aircraft. However, during the same year, Czechoslovakia experienced the first signs of Syrian problems with severely delayed payment of instalments.

By the late 1970s, the Syrian economy had proved unsustainable because of inefficiencies in the public sector. While inflation began to adversely affect the everyday life of Syrian civilians, corruption became omnipresent. This situation deteriorated due to declining aid from Gulf states (in 1985, more than 40 percent of the Syrian state annual budget was subsidised from foreign sources) and dwindling revenues from oil exports during the first half of the 1980s. These developments were among the reasons for Syria's foreign exchange crisis in 1986. Prague realised this a year earlier when Syria stopped payments for almost all of its debts. In October 1985, Hafez al-Assad visited Czechoslovakia and not only asked for a postponement of instalments for delivered weapons, but simultaneously requested



A Czechoslovak-manufactured AMB-S in service with one of Alawite militias loyal to Assad, operating as part of the 'Syrian Arab Army', in the hills of northern Latakia Province in 2015 or 2016. (via Martin Smisek)

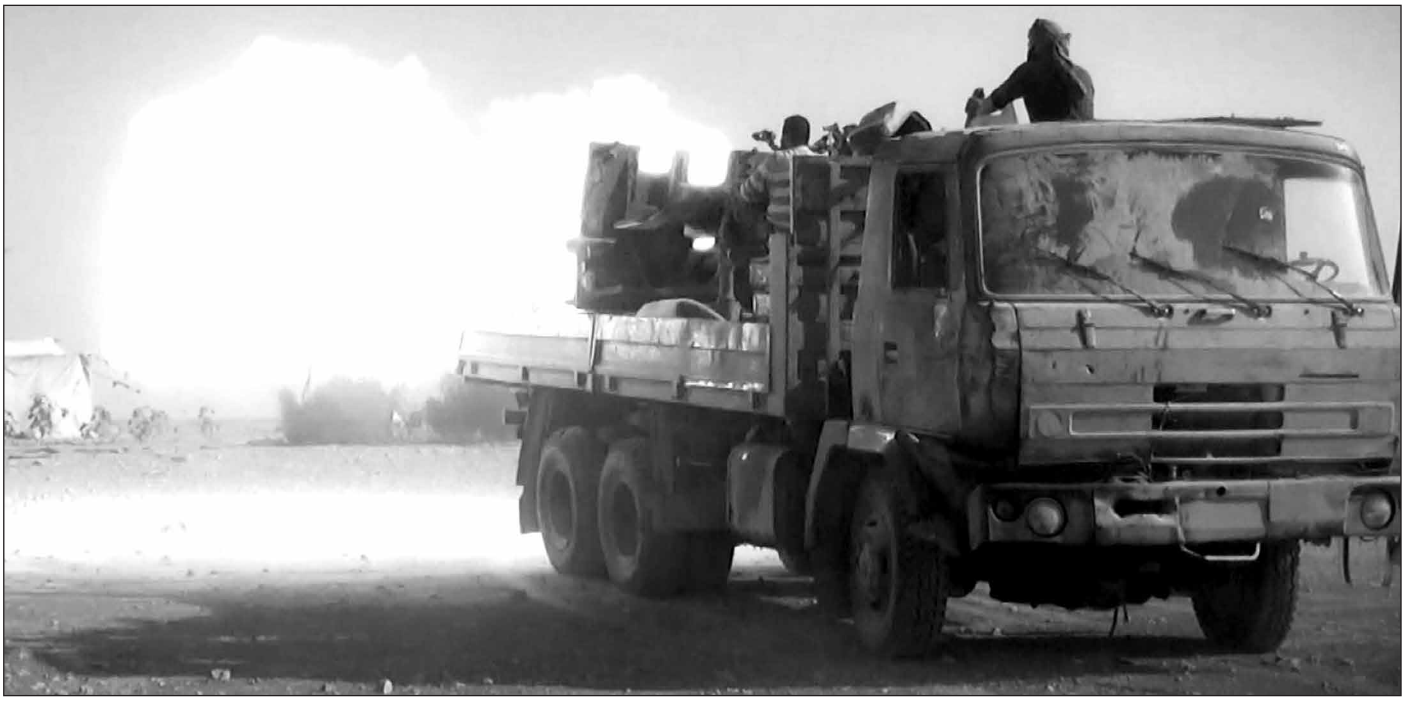
Czechoslovak-manufactured Tatra 148 trucks of the Syrian Arab Army: beaten-up and worn out after decades of service and no overhauls in between, they are still operational in significant numbers. (via Martin Smisek)

A pair of Tatra 815 trucks of the Syrian Arab Army, seen in the withdrawal from Lebanon in 2005. (via Martin Smisek)

further deliveries of arms (at that time, almost 60 percent of the annual Syrian state budget was spent on the military). His demands were largely ignored. Moreover, in 1986, several training courses for Syrian military personnel at the ZF VAAZ had to be cancelled because of Syrian financial problems (the last graduation ceremony of Syrian students before the fall of communism in Czechoslovakia took place at the VAAZ on 13 July 1989).

Massive arms deliveries to Syria during the late 1970s and early 1980s were one of the reasons for the country's massive debt. Almost all weapons and contracts for the construction of civilian industrial works were paid on credit. In 1987, Syria owed Czechoslovakia a total of some US$520 million. The debt increased to approximately US$900 million by late 1989. This was the main reason for the extensive reduction of additional Czechoslovak military and civilian contracts with Syria. The last major Czechoslovak arms deal with Syria comprised the delivery of T-72M1 tanks in the early 1990s.

Despite the repeated efforts of top-ranking Czechoslovak politicians and officials to make the Syrians pay their debts in the late 1980s, the situation did not change. When the communist regime in Czechoslovakia fell in 1989 and the country was divided into the Czech and Slovak Republics in 1993, Syrian debts still remained unpaid. Following the dissolution of the Czech and Slovak Federative Republic, the Syrian financial claim was divided between the successor states, with the Czech Republic allocated two-thirds of the original sum. The problem of Syrian indebtedness was not solved until 1 April 2005, when the governments of the Czech Republic, Slovak Republic and Syrian Arab Republic agreed on a confidential settlement of the amount receivable, but only at the expense of the successors of communist Czechoslovakia. Reportedly, Syria paid only 10 percent of its original financial obligations, the rest being written off as irrecoverable debt.[20]



In the course of the Syrian War numerous Tatra 815s have been converted to so-called 'technicals', usually through the installation of the S-60 57mm anti-aircraft gun on the flatbed. Such 'self-propelled artillery vehicles' have seen widespread deployment by several parties involved in this war – almost exclusively in the fire-support role. (via Martin Smisek)

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4 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/470, č.j. 0041325, Zpráva o plnění úkolů spojených s vývozem vojenské techniky, říjen 1956.

5 Zídek & Sieber, *Československo a Blízký východ v letech 1948–1989*, p.275.

6 Some high-ranking Syrian officers preferred even to buy military hardware in West Germany. VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/20-SMP-5, Současný stav dodávek a školení syrských specialistů, 7. srpen 1957.

7 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/30-SMP-5-1957, Uvolnění tarasnic 21 pro Sýrii, 14. říjen 1957.

8 NA, A ÚV KSČ, fond 1261/0/11 (Politické byro ÚV KSČ 1954-1962), sv. 144, ar.j. 190-191, bod 5, Hospodářská pomoc Sýrii, 5. července 1957. NA, A ÚV KSČ, fond 1261/0/11 (Politické byro ÚV KSČ 1954-1962), sv. 366, ar.j. 459, bod 2, Uzavření dohody mezi ČSSR a Syrskou arabskou republikou o dodávkách zařízení pro opravny vojenské techniky a o finančním vypořádání za dodávky speciálních materiálů z Československa do Sýrie, 3. října 1962.

9 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/SMP-5-35, O dodávkách voj. techniky do Syrie, 20. prosinec 1957. VÚA-VHA, MNO, 1957, karton 399, sign. 30-4/168, k č.j. 002949-1/SMP-5, Informační zpráva pro ZNGŠ jako přednes k jednání kolegia min. NO 10.9.1957. VÚA-VHA, MNO, 1962, karton 367, sign. 30/2/4, Souhrnné dokumenty o vývozu, Přehled o vývozu voj. techniky do kapitalistických států, 6. února 1959. VÚA-VHA, MNO, 1969, karton 172, Evidence GŠ/SMP-5 – vývozní skupina. VÚA-VHA, MNO, 1969, karton 173, Evidence GŠ/SMP-5 – vývozní skupina. VÚA-VHA, MNO, 1969, karton 174, Evidence GŠ/SMP-5 – vývozní skupina. VÚA-VHA, MNO, 1969, karton 175, Evidence GŠ/SMP-5 – vývozní skupina.

10 VÚA-VHA, MNO, 1956, karton 522, sign. 26/7/7/353, č.j. 041114 GŠ/SMP, zpráva instruktorů – zaslání, srpen 1956.

11 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/570, Informační zprávy z Egypta, Výkaz činnosti skupiny Císař-Pištěk za dobu od 15.9.-15.10.1956.

12 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/570, Informační zprávy z Egypta, Zpráva o činnosti instruktorů protiletadlového materiálu 85 mm PLK vz. 44 a PUAZO-4a.

13 VÚA-VHA, MNO, 1956, karton 270, sign. 13/1/2b-8, č.j. 0040686GŠ/SMP, Studie o využití radiolokátorů, 18. květen 1956.

14 VÚA-VHA, MNO, 1956, karton 644, sign. 55/3/58, č.j. 041109GŠ/SMP, Vyslání odborníků na stavbu letišť do Sýrie, 27. srpna 1956.

15 VÚA-VHA, MNO, 1956, karton 628, sign. 30/1/44-B, č.j. 07090VPÚ/v, Zpráva o expertise v Syrii, 1. listopadu 1956.

16 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/20-SMP-5, Současný stav dodávek a školení syrských specialistů, 7. srpen 1957.

17 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/398, č.j. 00524/56, Měsíční hlášení o činnosti čs. specialistů, 23. srpna 1956.

18 VÚA-VHA, MNO, 1956, karton 258, sign. 16/6/3/12, č.j. 0057665/HP-VL, Zápis o vyšetřování katastrofy letounu CS-102 v Egyptě – zaslání, 7. září 1956.

19 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/403B, č.j. 00532/56, Měsíční hlášení o činnosti čs. specialistů, 12. září 1956.

20 VÚA-VHA, MNO, 1957, karton 398, sign. 31-3/29, č.j. 058456VL/KO, Zpráva – zaslání, 31. prosinec 1956.

21 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2/5/7, č.j. 0293/SMP-5, Zpráva o repatriaci čs. příslušníků z Egypta, leden 1957. VÚA-VHA, MNO, 1957, karton 398, sign. 30-3/38, Vysílání čs. instruktorů do zahraničí.

22 VÚA-VHA, MNO, 1957, karton 398, sign. 31-3/29, č.j. 058456VL/KO, Zpráva – zaslání, 31. prosinec 1956.

23 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 001294-7/57-25-01, Informační zpráva o stavu dodávek vojenské techniky z ČSR do Syrie, 26. července 1957.

24 VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7-398, č.j. 00524/56, Měsíční hlášení o činnosti čs. specialistů, 23. srpna 1956. VÚA-VHA, MNO, 1956, karton 523, sign. 26/7/7/403B, č.j. 00532/56, Měsíční hlášení o činnosti čs. specialistů, 12. září 1956.

25 VÚA-VHA, MNO, 1957, karton 398, sign. 30-4/131, č.j. 013378, Seznam příslušníků kursů u VTA AZ – zaslání, 16. srpna 1957.

26 At the Tank Training School at Dědice near Vyškov from 16 July 1956 to 29 September 1956 (VÚA-VHA, MNO, 1957, karton 398, sign. 30-4/110, č.j. 0021418/SMP-5-1957, Zpráva a návrh usnesení kolegia ministra národní obrany – předložení, srpen 1957).

27 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/20-SMP-5, Současný stav dodávek a školení syrských specialistů, 7. srpen 1957. VÚA-VHA, MNO, 1957, karton 399, sign. 33/2/12, č.j. 001296-7/25-21, Návrh usnesení politického byra ÚV KSČ o dosavadním průběhu technické pomoci a o rozsahu dalšího poskytování této pomoci Egyptu, Syrii a Jemenu, 5. srpna 1957.

28 VÚA-VHA, MNO, 1957, karton 399, sign. 33/2/12, č.j. 001296-7/25-21, Návrh usnesení politického byra ÚV KSČ o dosavadním průběhu technické pomoci a o rozsahu dalšího poskytování této pomoci Egyptu, Syrii a Jemenu, 5. srpna 1957.

29 VÚA-VHA, MNO, 1957, karton 399, sign. 33/2/12, č.j. 001296-7/25-21, Návrh usnesení politického byra ÚV KSČ o dosavadním průběhu technické pomoci a o rozsahu dalšího poskytování této pomoci Egyptu, Syrii a Jemenu, 5. srpna 1957.

30 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, k č.j. 00232/17/SMP-5, Jednání o školení v Damašku, 24. červen 1957. VÚA-VHA, MNO, 1957, karton 397, sign. 30/2/5/79, č.j. 02017/SMP-5, Zpráva o jednání čs. delegace v Egyptě a Syrii, 27. července 1957.

31 AMZV, TO 1945-1959, Sýrie, karton 1, inv.č. 28, 116/3512, č. 108.544/57, Telegram z Damašku, 6. března 1957.

32 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2/5/79, č.j. 02017/SMP-5, Zpráva o jednání čs. delegace v Egyptě a Syrii, 27. července 1957.

33 Within the frame of this deal (Supplement No. 3 to Contract 201-8 from 28 April 1956), two Syrian aerospace medicine physicians were also instructed in Czechoslovakia. VÚA-VHA, MNO, 1957, karton 397, sign. 30/2/222, Supplément No. 3 au Contrat 201-8 du 28 avril 1956.

34 VÚA-VHA, MNO, 1958, karton 370, sign. 30-4/26, č.j. 02741-ATS 1958, Ukončení kursu akce 156 výsledky – zaslání, 5. červen 1958.

35 VÚA-VHA, MNO, 1957, karton 397, sign. 30/2, č.j. 00232/SMP-5-35, O dodávkách voj. techniky do Syrie, 20. prosinec 1957. VÚA-VHA, MNO, 1957, karton 399, sign. 30-4/151, č.j. 03008/SMP-5-1957, Školení syrských vojenských odborníků – příprava, říjen 1957.

36 VÚA-VHA, MNO, 1958, karton 370, sign. 30-4/26, č.j. 02741-ATS 1958, Ukončení kursu akce 156 výsledky – zaslání, 5. červen 1958. VÚA-VHA, MNO, 1958, karton 371, sign. 30/4/2/5, č.j. 006/1958, Vyhodnocení kursu zahraničních specialistů – předložení, 6. března 1958.

37 NA, A ÚV KSČ, fond 1261/0/11 (Politické byro ÚV KSČ 1954-1962), sv. 324-325, ar.j. 412, bod 27, Další postup vůči Sjednocené arabské republice a Syrské arabské republice ve speciální oblasti.

CHAPTER 3

1 Zídek & Sieber, *Československo a Blízký východ v letech 1948–1989*, pp.275–276.

2 VÚA-VHA, MNO, 1958, karton 369, sign. 30-4/15, č.j. 081071, Souhrnná zpráva o seznamovacích kursech akce 105 a 104 – hlášení, 1. březen 1958.

3 VÚA-VHA, MNO, 1962, Sekr.min., karton 25, sign. S-3/43, č.j. 0013275/24-61, Technická pomoc Syrii, 12. únor 1962.

4 *Ibid.* VÚA-VHA, MNO, 1969, karton 173, Evidence GŠ/SMP-5 – vývozní skupina.

5 VÚA-VHA, MNO, 1958, karton 369, sign. 30/3/2/1, Kontrakt č. 20-05-13, 31. ledna 1958. VÚA-VHA, MNO, 1958, karton 369, sign. 30/3/2/1, č.j. 0010414 SMP-5, Vyslání čs. instruktorů do Sýrie – doplňkový požadavek, únor 1958. VÚA-VHA, MNO, 1961, karton 453, sign. 30-4, Informační zprávy o kursech.

6 VÚA-VHA, MNO, 1959, karton 351, sign. 30-3/9, č.j. 06931 SMP-5, Hlášení z kursu 508, 6. duben 1959. VÚA-VHA, MNO, 1959, karton 351, sign. 30-3/12, č.j. 07291 5, Zpráva z kursu čís. 508 – zaslání, květen 1959.

7 VÚA-VHA, MNO, 1959, karton 350, sign. 30/3/2/16, č.j. 09040, Vyslání specialistů do Sýrie, 23. listopadu 1959. VÚA-VHA, MNO, 1960, karton 462, sign 30-3/39, č.j. 052567, Zpráva o plnění plánu za měsíc září 1960, 30. září 1960. VÚA-VHA, MNO, 1960, karton 462, sign 30-3/41, č.j. 052301, Měsíční hlášení o plnění plánu, 31. srpna 1960.

8 VÚA-VHA, MNO, 1960, karton 463, sign. 30/3/2/2, č.j. 053122, Kurs 556, zpráva o plnění plánu za měsíc listopad 1960, 30. listopadu 1960.

CHAPTER 4

1 Zídek & Sieber, *Československo a Blízký východ v letech 1948–1989*, p.277.

2 NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 26, Další postup vlády ČSSR vůči Sýrii v otázce dodávek zbraní v souvislosti s odtržením Sýrie od Egypta, 1961.

3 VÚA-VHA, MNO, 1961, karton 457, sign. 30-5/74, č.j. 013331-OTP-61, Umožnění studia syrským příslušníkům na VAAZ.

4 No further details of Samam are contained within the records.

5 *Ibid.* and VÚA-VHA, MNO, 1962, Sekr.min., karton 25, sign. S-3/43, č.j. 0013275/24-61, Technická pomoc Syrii, 12. únor 1962.

6 NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 27, Požadavky vojenské delegace SAR, 1962.

7 Within the frame of the general agreement, contracts for specific facilities were awarded separately under the cover names 20-20-33, 20-22-33 and 20-23-33. NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 27, Požadavky vojenské delegace SAR, 1962. NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 28, Dohoda mezi ČSSR a SAR o dodávkách zařízení pro opravny vojenské techniky a o finančním vypořádání za dodávky speciálních materiálů z ČSSR do Sýrie, 1962. VÚA-VHA, MNO, 1975, karton 12, sl. 85/8, č.j. 02030/SÚP-1975, Vztahy mezi ČSSR a Sýrií v oblasti speciálních dodávek, 8. září 1975.

8 NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 27, Požadavky vojenské delegace SAR, 1962. VÚA-VHA, MNO, 1964, karton 326, sign. L/20, č.j. 00520-48/1964, Rozpis plánu na rok 1964, 12. února 1964. VÚA-VHA, MNO, 1968, karton 62, sl.

30/2, Výkazy jmenovitých položek za I. – IV. čtvrtletí 1964, 19. února 1965.

9 VÚA-VHA, MNO, 1962, karton 375, sign. D/26, č.j. 01165/OTP, Výstavba leteckého učiliště v SyAR, červenec 1962. VÚA-VHA, MNO, 1962, karton 375, sign. D/39, č.j. 017180/50, Zpráva o služ. cestě do SyAR – zaslání, 9. říjen 1962.

10 A Syrian high-ranking military delegation led by General Wadih Moukabari visited Czechoslovakia during its return flight from the Soviet Union where, in November 1962, it was familiarised with new types of Soviet armament such as the MiG-21F-13 fighter, R-3S short-range air-to-air missile, SA-75 Dvina surface-to-air missile system and various radars. During their short stay in Czechoslovakia, the Syrian officers saw the command post of the 1st Fighter Aviation Division at Bechyně, the Aviation Training School at Košice and new types of Czechoslovak aircraft (VÚA-VHA, MNO, 1962, karton 375, sign. D/46, č.j. 050799-OTP, Návštěva velitele letectva armády SyAR, listopad 1962).

11 VÚA-VHA, MNO, 1963, karton 362, sign. J/7, č.j. 002043/43, Souhranná zpráva o poskytování technické pomoci HMVZ za rok 1962, leden 1963.

12 VÚA-VHA, MNO, 1963, karton 359, sign. D/13, č.j. 015582/A3, Akce 7414 nabídkového projektu zak.E 1976/3, 18. února 1963.

13 VÚA-VHA, MNO, 1963, karton 360, sign. D/42, č.j. 02276/OTP, Další opatření k nabídce leteckého učiliště do Syrie, červenec 1963.

14 VÚA-VHA, MNO, 1961, karton 454, sign. 30/4/2/18, č.j. 013223/OTP, Umožnění studia na VA AZ, 10. listopadu 1961. VÚA-VHA, MNO, 1962, karton 375, sign, D/?, Poskytování technické pomoci Syrské arabské republice na úseku vysokoškolského studia.

15 VÚA-VHA, MNO, 1963, karton 360, sign. D/26, Zaslání gen. kontraktů, 28. února 1963.

16 VÚA-VHA, MNO, 1963, karton 360, sign. D/17, č.j. 02134, Příjezd 40 syrských příslušníků určených pro studium na ZF/VAAZ, 20. března 1963.

17 VÚA-VHA, MNO, 1963, karton 360, sign. D/81, č.j. 02960, Žádost o odeslání syrského posluchače do vlasti, 10. září 1963.

18 VÚA-VHA, MNO, 1966, karton 245, sign. ?, č.j. 05190/OTP, ukončení výcviku 32 poz. techniků a 18 syrských pilotů v ČSSR, 6. května 1966. VÚA-VHA, MNO, 1966, karton 246, sign. D/38, ČVS: VB/4 – 71/10-66, obv. AL-RATTA – zpráva o výsledku vyšetřování, 23. května 1966.

19 VÚA-VHA, MNO, 1967, karton 158, sl. 27/1/2, č.j. 00750/10-67, Komplexní rozbor zahraničních styků MNO v r. 1966, 10. dubna 1967.

20 VÚA-VHA, MNO, 1963, karton 362, sign. K/113, Informační zprávy o kursech. VÚA-VHA, MNO, 1963, karton 363, sign. D/20, Měsíční hlášení k 16.5.1963, K-627, A-104, 16. května 1963. VÚA-VHA, MNO, 1963, karton 363, sign. D/21, Hlášení o činnosti čs. specialistů pracujících v Syrii, 19. července 1963.

21 VÚA-VHA, MNO, 1964, karton 325, sign. D/43, Kurs 626 – zaslání závěrečné zprávy, 4. června 1964. VÚA-VHA, MNO, 1963, karton 363, sign. D/21, Hlášení o činnosti čs. specialistů pracujících v Syrii, 19. července 1963.

22 VÚA-VHA, MNO, 1963, karton 363, sign. D/21, Hlášení o činnosti čs. specialistů pracujících v Syrii, 19. července 1963.

23 VÚA-VHA, MNO, 1964, karton 325, sign. D/23, Zprávy za měsíc leden 1964 skupiny Ing. Mužíka v Damašku, 3. února 1964

24 VÚA-VHA, MNO, 1964, karton 327, sign. D/13, Zpráva skupiny architektů za měsíc únor 1964, 6. dubna 1964.

25 *Ibid.*

26 VÚA-VHA, MNO, 1964, karton 327, sign. D/16, Zaslání zprávy, 3. května 1964.

27 VÚA-VHA, MNO, 1964, karton 325, sign. D/43, Kurs 626 – zaslání závěrečné zprávy, 4. června 1964.

28 VÚA-VHA, MNO, 1963, karton 360, sign. D/61, Zaslání doplňku, 12. září 1963.

29 VÚA-VHA, MNO, 1963, karton 363, sign. D/21, Hlášení o činnosti čs. specialistů pracujících v Syrii, 19. července 1963.

30 VÚA-VHA, MNO, 1963, karton 90, sign. 12/1-24, č.j. 648 OTP-1963, Zpráva mjr. Dr. Horáčka a hodnocení pplk. Špety ze Sýrie, 26. července 1963. VÚA-VHA, MNO, 1964, karton 91, sign. 38/3-12, Závěrečné hodnocení činnosti. Skupina lékařů – akce 104, 30. prosince 1963.

31 VÚA-VHA, MNO, 1963, karton 88, sign. 38/3-151, č.j. Programy kursu číslo 237 akce 104, 19. listopadu 1963.

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33 VÚA-VHA, MNO, 1964, karton 91, sign. 38/3-24, č.j. 035053-50/1964, Závěrečná zpráva o ukončení kursu čís. 237/104, 7. srpna 1964.

34 In 1958, the Soviets and Syrians signed Contract 88-391 for ‘technical assistance’ – the training of Syrian military personnel by Soviet advisors. In 1962, both sides entered into Contract 28-602 for flying training of Syrian pilots on jet aircraft.

35 VÚA-VHA, MNO, 1964, karton 326, sign. D/86, č.j. 03178/OTP, Přehled o Sýrii a o technické pomoci, kterou jí ve vojenské oblasti poskytuje ČSSR. VÚA-VHA, MNO, 1966, karton 244, sign. D/11, příloha k č.j. 0120853, Zpráva ze služební cesty do Syrie.

36 VÚA-VHA, MNO, 1962, karton 83, sign. 38/3-153, č.j. 017180/50, Zpráva o služ. cestě do SyAR – zaslání, 9. říjen 1962. NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 30, Uzavření dohody mezi ČSSR a Sýrií o dodávkách dalšího vojenského materiálu. 1964–1965.

37 NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 30, Uzavření dohody mezi ČSSR a Sýrií o dodávkách dalšího vojenského materiálu. 1964–1965.

38 *Ibid.*

39 NA, A ÚV KSČ, fond 1261/0/44 (Kancelář 1. tajemníka ÚV KSČ Antonína Novotného – II. část), karton 220 (Sýrie), inv. č. 515, obal 31, Žádost vlády SAR o odklad splátek za dodávky speciálních materiálů a speciálních investic, 1967.

40 VÚA-VHA, MNO, 1963, karton 360, sign. D/82, Přecvičení na L-29, 21. prosince 1963.

41 VÚA-VHA, MNO, 1964, karton 325, sign. D/17, Doplněk č. 4 – zaslání, 10. února 1964. VÚA-VHA, MNO, 1964, karton 325, sign. D/21, Doplněk č. 5 ke generálnímu kontraktu č. 20-13-212, 27. února 1964.

42 VÚA-VHA, MNO, 1964, karton 325, sign. D/65, č.j. 032114, Možnosti kontraktace kursů akce 104, 28. březen 1964.

43 VÚA-VHA, MNO, 1966, karton 244, sign. D/11, č.j. 0/120912/HTS-52, Zpráva ze služební cesty do Sýrie, 5. února 1964.

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ABOUT THE AUTHOR

Martin Smisek was born in 1985 and received a master's degree in aerospace engineering at the Czech Technical University in Prague in 2010. In addition to his regular job of a mechanical design engineer, he has written over 70 articles about contemporary armoured vehicles, modern air-launched weapons as well as Czechoslovak military history and local conflicts since 1945. He is the author of the ground-breaking book *Super Sabry nad Československem* (Super Sabres over Czechoslovakia) about US spyflights over Czechoslovakia in 1955. Martin Smisek is also a regular contributor of the Czech and Slovak leading military website www.valka.cz.